ADDITIONAL

Service Manual

PIONEER

ORDER NO.
HRT-246-0

WATERPROOFING REPAIR MANUAL

PK-5AW

PK-R7AW

- To prevent water leakage, be sure to assemble following the directions beginning on page one.
- Perform the air leakage test on page 4 (using the GGF-025) to check for water leakage.
- To repair a leak, refer to the troubleshooting guide beginning on page 5.

THE FOLLOWING JIG, TOOLS AND MATERIALS ARE REQUIRED FOR REPAIR SERVICE.

PARTS NO.	DESCRIPTION
GGF-025	Water leak checker (Special jack with vinyl tube)
GGL-060	Crab-type screwdriver
GGL-061	Crab-type screwdriver
GGK-081	Grip with chuck for screwdriver
GYL-015	Silicone based adhesive
GEM-006	Silicone grease for fixed components
GEM-007	Silicone grease for movable components

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS [USA] INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
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PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia

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●ASSEMBLY PROCEDURE

1. Attaching the cassette mechanism assembly to the case.

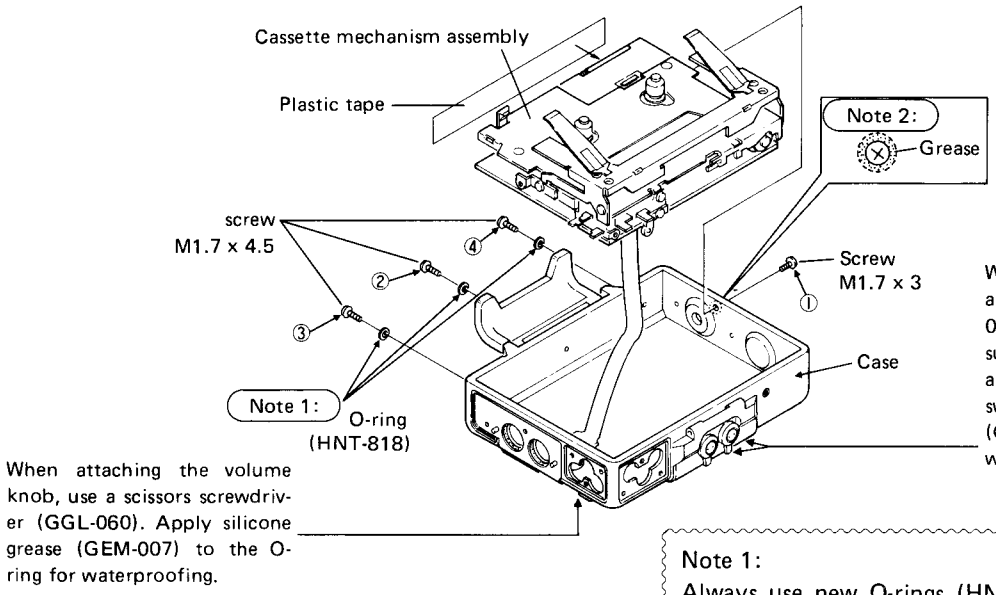
Cassette mechanism assembly
Plastic tape
Note 2:
Grease
screw
M1.7 x 4.5
Screw
M1.7 x 3
Case
Note 1:
O-ring
(HNT-818)
When attaching the volume knob, use a scissors screwdriver (GGL-060). Apply silicone grease (GEM-007) to the O-ring for waterproofing.
When attaching the knobs, use a scissors screwdriver (GGL-061). When assembling, be sure the positions of the knobs are aligned with those of the switches. Apply silicone grease (GEM-007) to the O-ring for waterproofing.

Fig. 1

1) The four screws holding the assembly in the case should be tightened in order from one to four as numbered in the diagram.

Note 1:
Always use new O-rings (HNV-818) on screws ②, ③ and ④. (Replace all polyester washers with O-rings.)
Note 2:
After tightening screw ①, apply silicone grease (GEM-006) to the area around the screw.

2. Attaching the escutcheon.

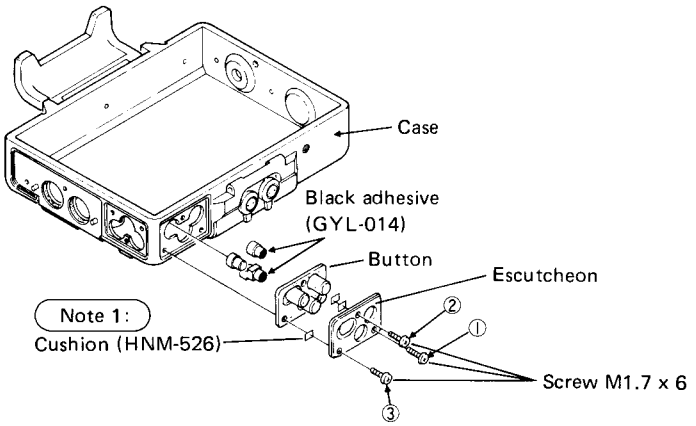

Fig. 2

1) Attach the cushions to the escutcheon.
2) Apply black adhesive (GYL-014) to the tips of the dummy buttons. (To be attached to the button)
3) Set the button and escutcheon in place and attach with the three screws, tightening them in order from one to three as numbered in the diagram.

Note 1:
Always use new cushions (HNM-526) for the three screws. (Attach the sticky side of the cushions to the escutcheon so that they cover the screw holes.)
Note 2:
Attach the button so that they fit firmly into the grooves in the case.
Note 3:
Be sure to apply grease (GEM-007) to the tips of each of the three screws.

3. Attaching the DC-IN side (Bracket and Escutcheon)

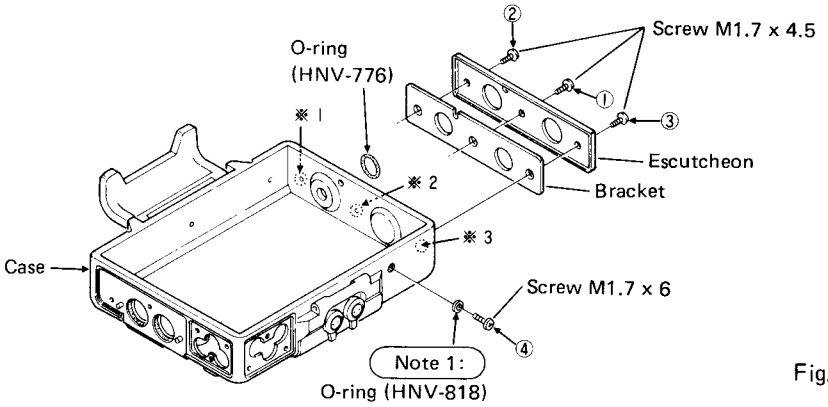

Fig. 3

1) Apply grease (GEM-006) to the screw holes and the area around them (marked *1, *2 and *3 in the diagram) on the outside of the case.
2) Set the bracket and escutcheon in place and attach with the three screws, tightening them in order from one to three as numbered in the diagram.
3) Place a new O-ring around screw ④ and tighten the screw.

Note 1:
Always use a new O-ring (HNV-818) with screw ④.

4. Attaching the headphone side (Bracket and Escutcheon)

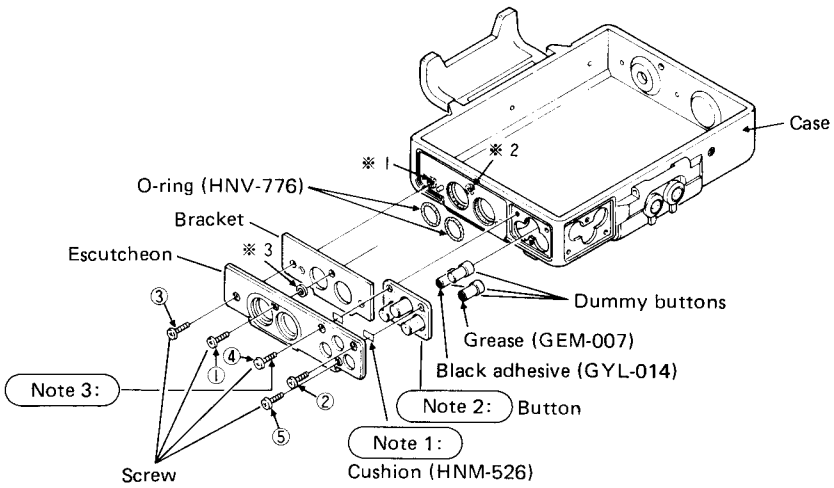

Fig. 4

1) Apply grease (GEM-006) to the screw holes and the area around them (marked *1 and *2 in the diagram) on the outside of the case.
2) Coat the rubber bushing (*3) to prevent holes from forming. (GEM-006)
3) Attach the cushions to the escarsion.
4) Apply grease (GEM-007) and black adhesive (GYL-014) to the dummy buttons.
5) Insert the O-rings (HNV-776).
6) Set the button, bracket and escarsion in place and attach with the five screws, tightening them in order from one to five as numbered in the diagram.

Note 1:
Always use new cushions (HNM-526) with screws ②, ④ and ⑤. (Attach the sticky side of the cushions to the escarsion so that they cover the two screw holes.)
Note 2:
Attach the button so that they fit firmly into the grooves in the case.
Note 3:
Be sure to apply grease (GEM-007) to the tips of screws ②, ④ and ⑤.

5. Attaching the Packing

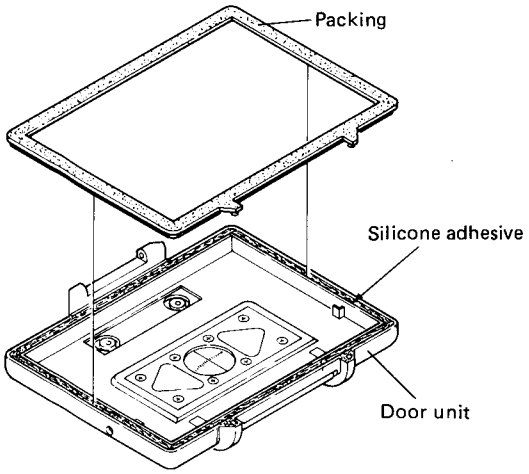

Fig. 5

1) Apply a silicone adhesive (GYL-015) to the grooves in the door unit.

6. Attaching the Door Unit

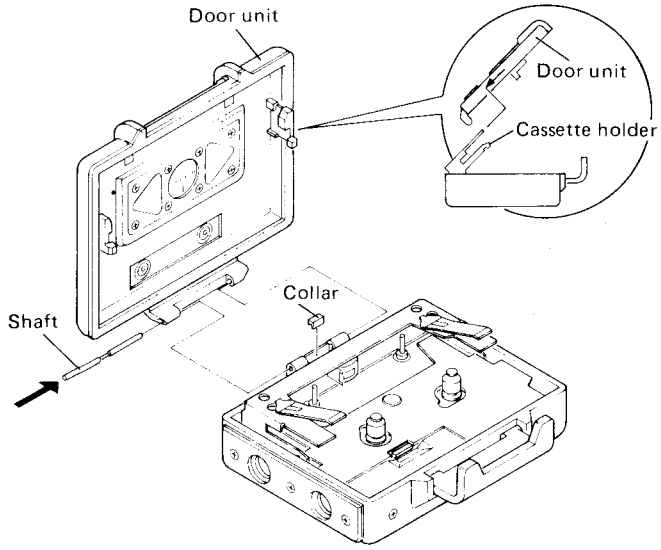

Fig. 6

1. Pass the cassette holder through the hinge on the door unit and then insert the shaft.

●CHECKING FOR AIR(WATER) LEAKS

The PK-5AW and PK-R7AW are designed to prevent water from entering from the outside.

Water leakage testing method (See Fig. 7)

1. Insert the GGF-025 into the PHONES jack of the portable stereo cassette recorder and tighten it.
2. While blowing air through the hose, place the recorder in a bucket of water.
3. Check for any air leaks while the recorder is underwater.

Note 1:

Air will leak from the gasket when the air pressure exceeds a certain level. This is not a malfunction of the waterproof case. (If this occurs, lower the air pressure a little.) The gasket will leak at a low pressure if it is cracked or chipped, however.

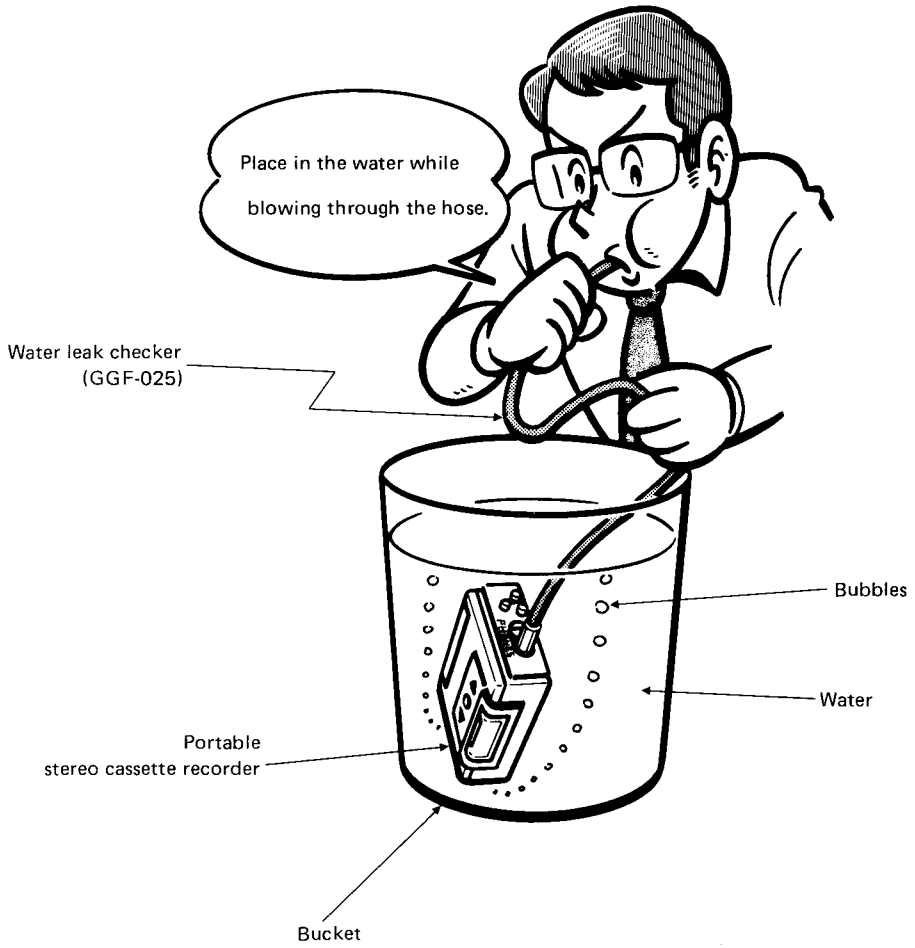

Fig. 7

●TROUBLESHOOTING GUIDE

If a leak is found at any one of points Ⓐ – Ⓘ during the air leak check procedure, refer to the page indicated for that point (see Figs. 8 and 9).

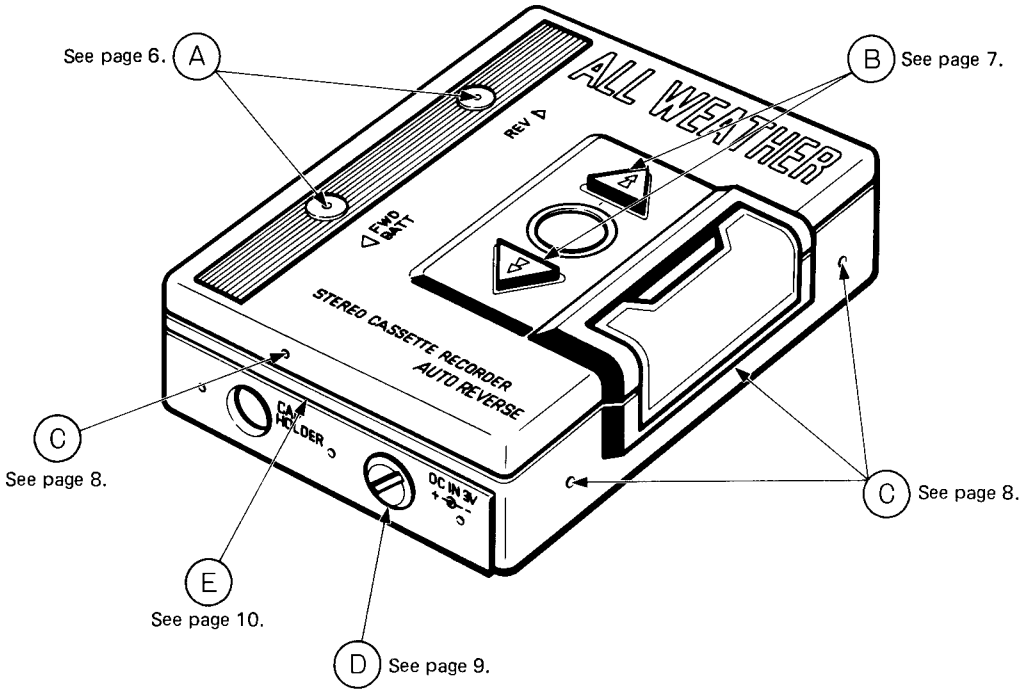

Fig. 8

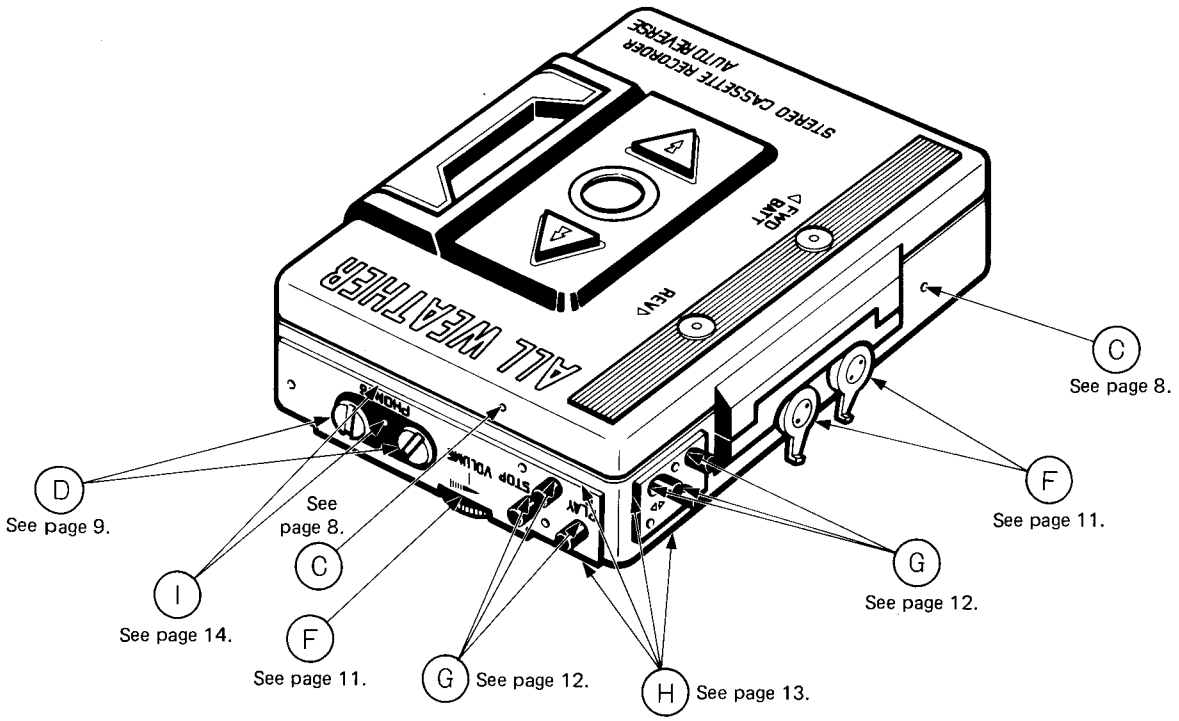

Fig. 9

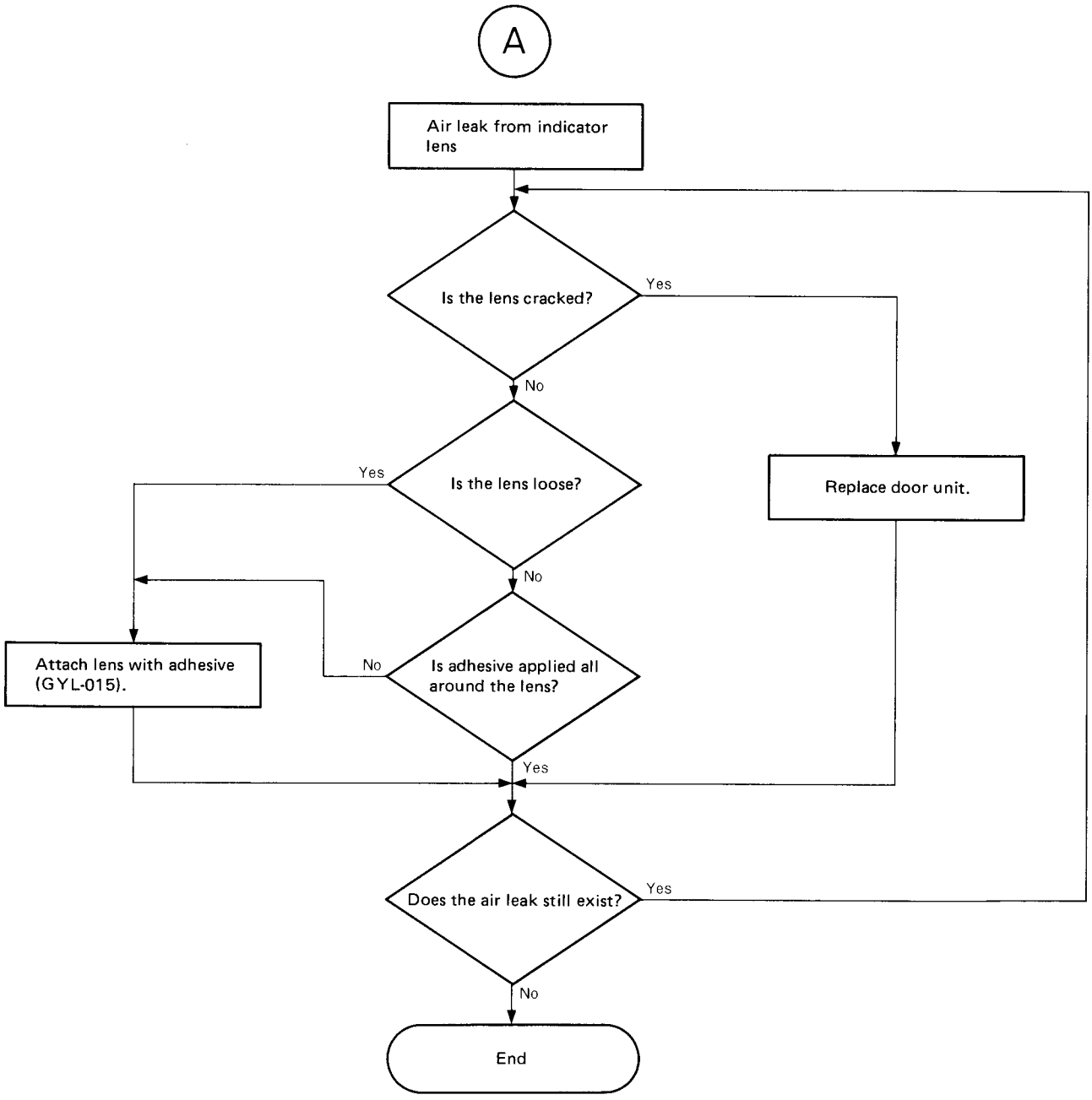
A
Air leak from indicator lens
Is the lens cracked?
Yes
No
Is the lens loose?
Yes
No
Replace door unit.
Attach lens with adhesive (GYL-015).
No
Is adhesive applied all around the lens?
Yes
Does the air leak still exist?
Yes
No
End

Fig. 10

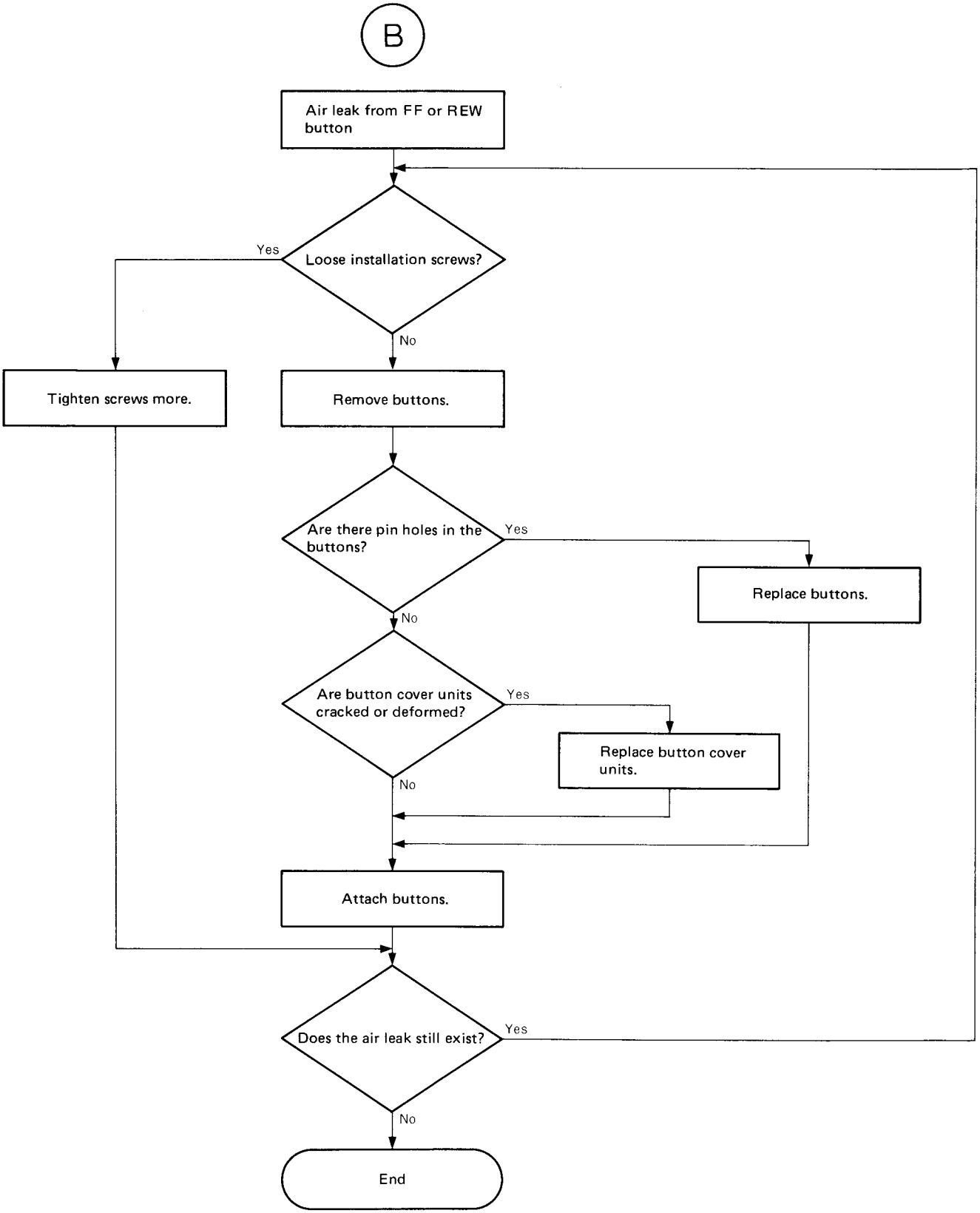
B
Air leak from FF or REW button
Loose installation screws?
Yes
No
Tighten screws more.
Remove buttons.
Are there pin holes in the buttons?
Yes
Replace buttons.
No
Are button cover units cracked or deformed?
Yes
Replace button cover units.
No
Attach buttons.
Does the air leak still exist?
Yes
No
End

Fig. 11

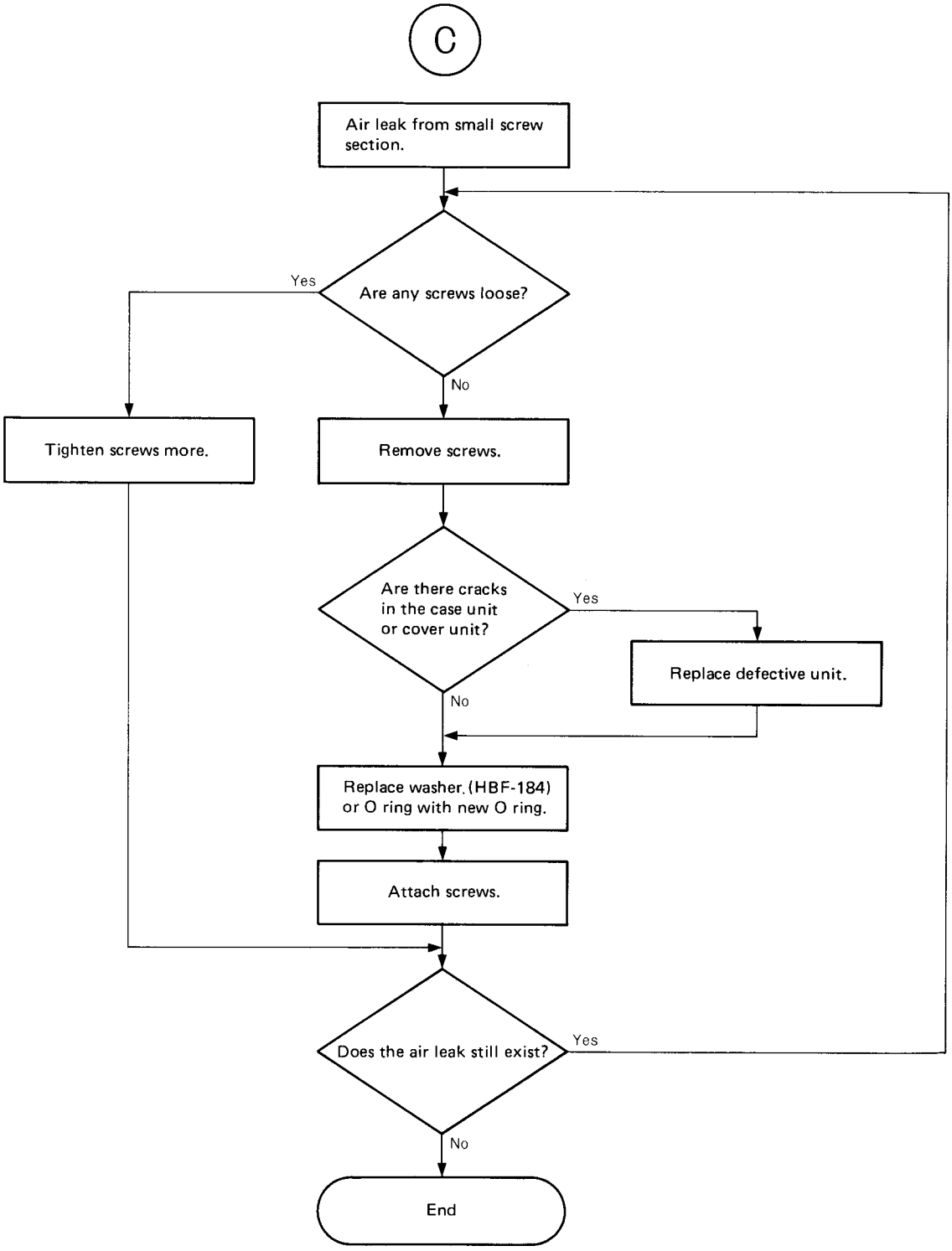
C
Air leak from small screw section.
Are any screws loose?
Yes
No
Tighten screws more.
Remove screws.
Are there cracks in the case unit or cover unit?
Yes
Replace defective unit.
No
Replace washer (HBF-184) or O ring with new O ring.
Attach screws.
Does the air leak still exist?
Yes
No
End

Fig. 12

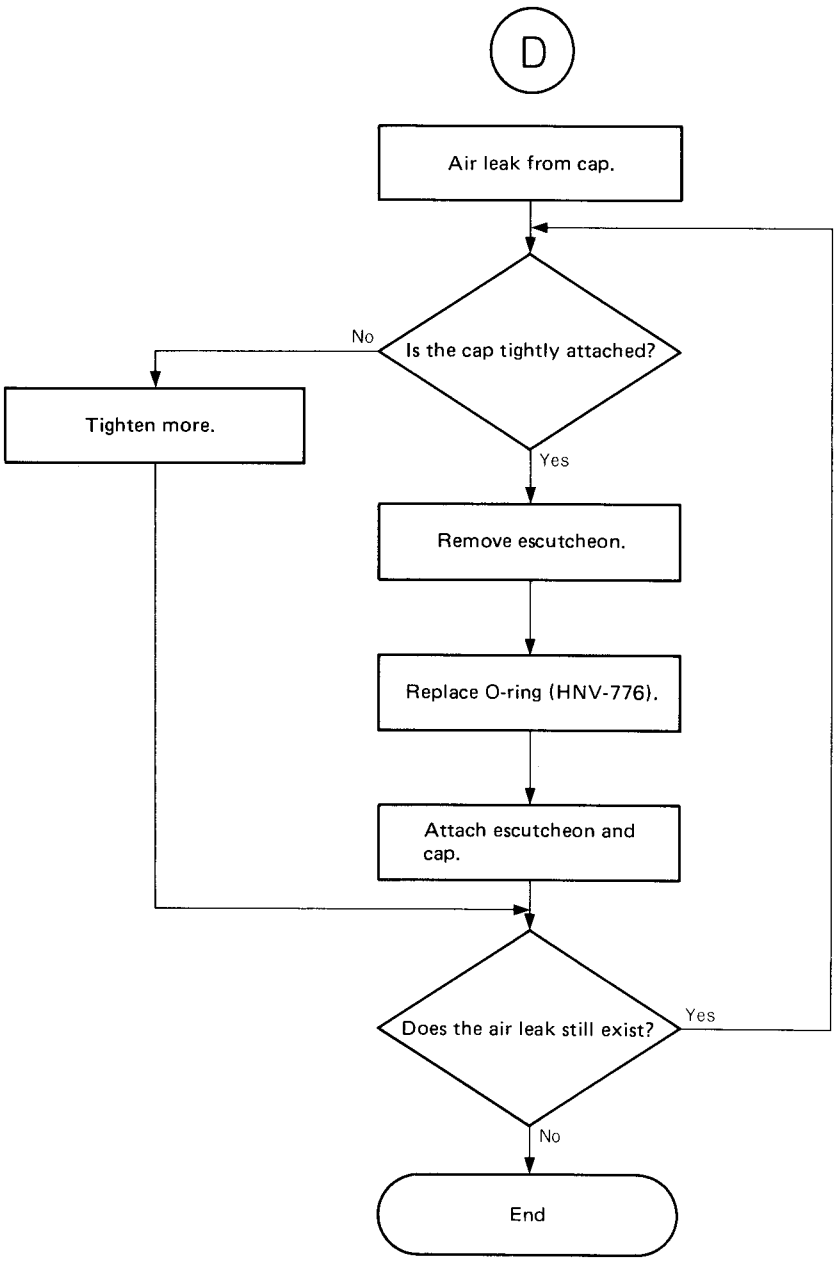
D
Air leak from cap.
Is the cap tightly attached?
No
Tighten more.
Yes
Remove escutcheon.
Replace O-ring (HNV-776).
Attach escutcheon and cap.
Does the air leak still exist?
Yes
No
End

Fig. 13

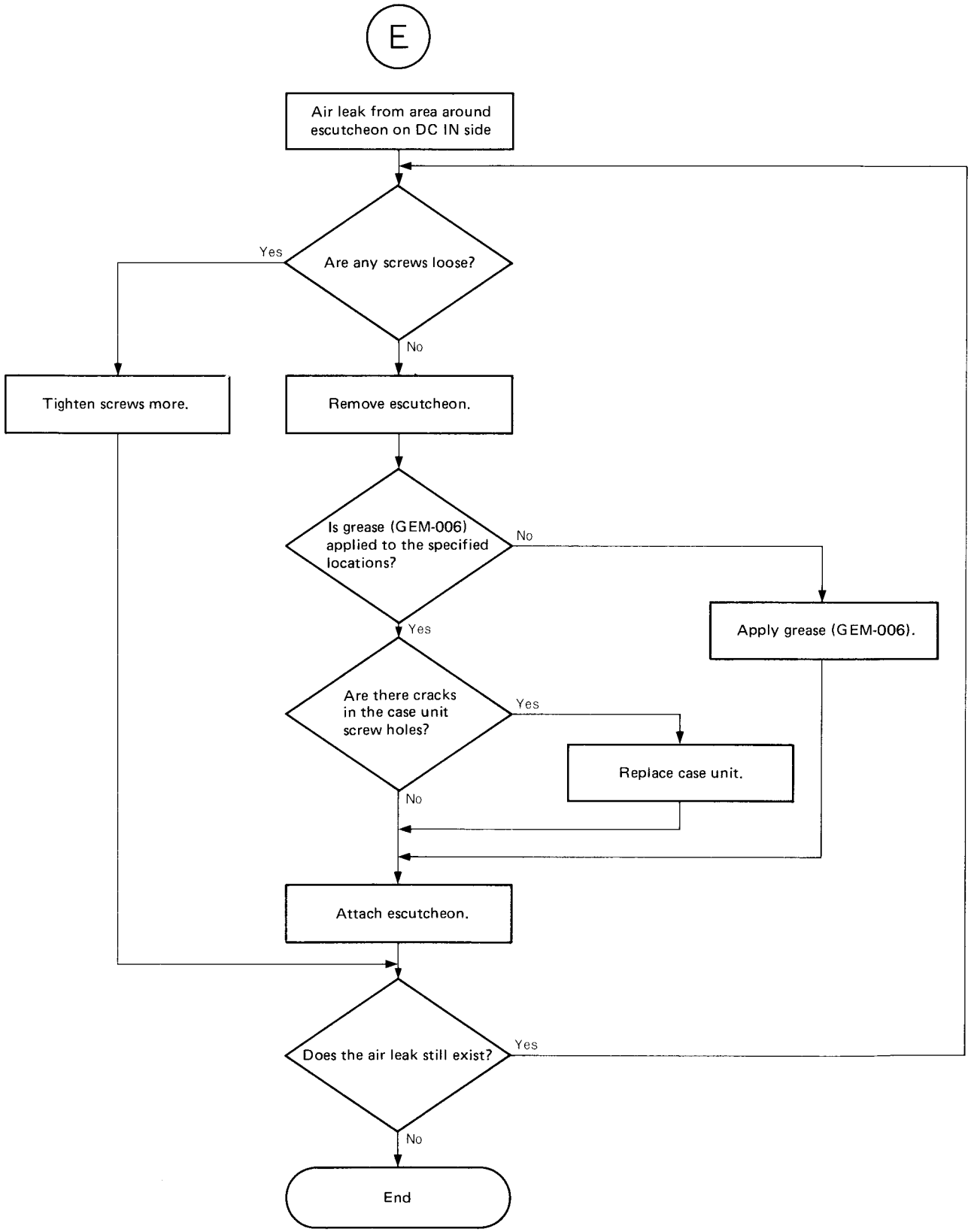
E
Air leak from area around escutcheon on DC IN side
Are any screws loose?
Yes
No
Tighten screws more.
Remove escutcheon.
Is grease (GEM-006) applied to the specified locations?
No
Apply grease (GEM-006).
Yes
Are there cracks in the case unit screw holes?
Yes
Replace case unit.
No
Attach escutcheon.
Does the air leak still exist?
Yes
No
End

Fig. 14

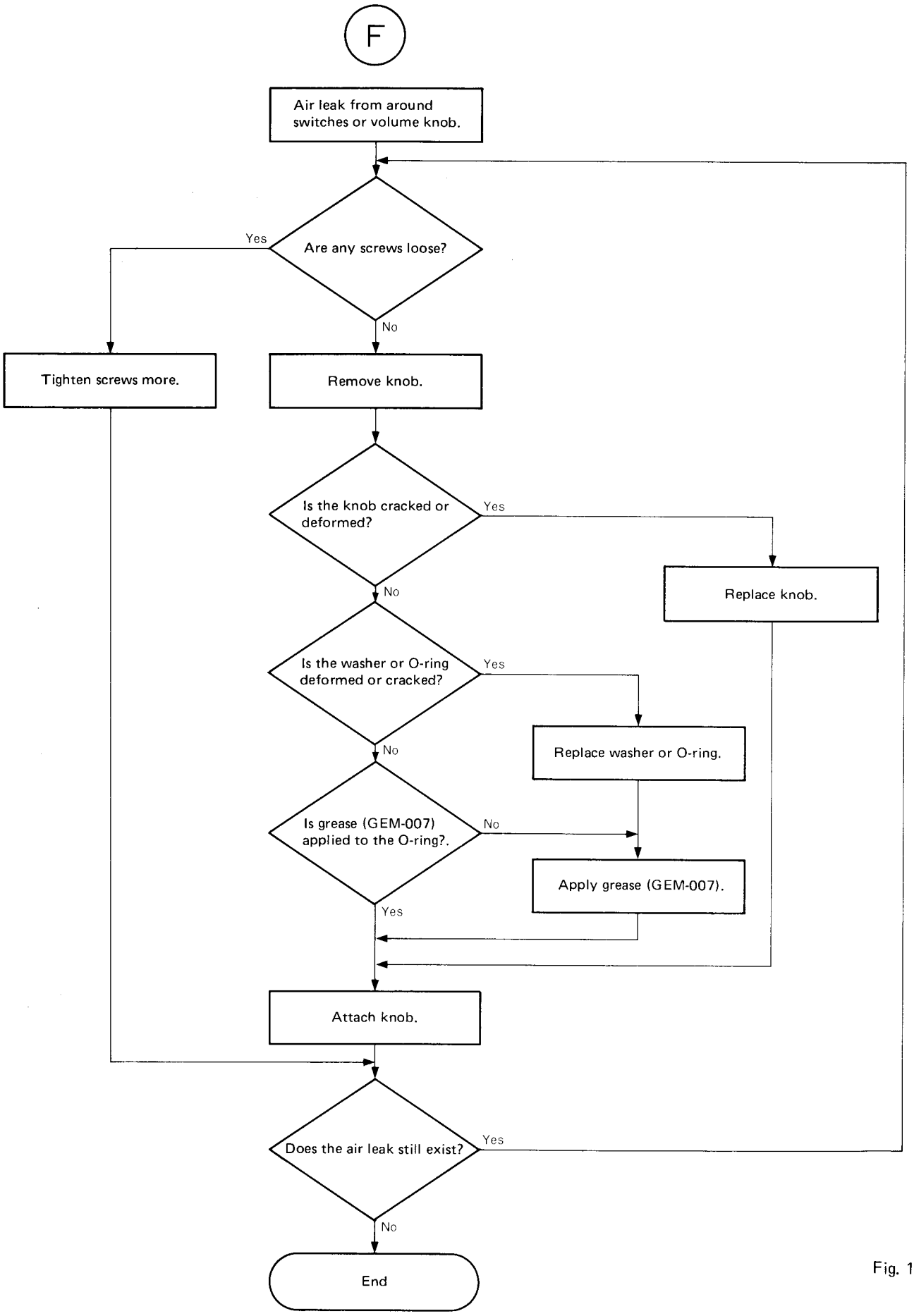
F
Air leak from around switches or volume knob.
Are any screws loose?
Yes
No
Tighten screws more.
Remove knob.
Is the knob cracked or deformed?
Yes
No
Replace knob.
Is the washer or O-ring deformed or cracked?
Yes
No
Replace washer or O-ring.
Is grease (GEM-007) applied to the O-ring?.
No
Yes
Apply grease (GEM-007).
Attach knob.
Does the air leak still exist?
Yes
No
End

Fig. 15

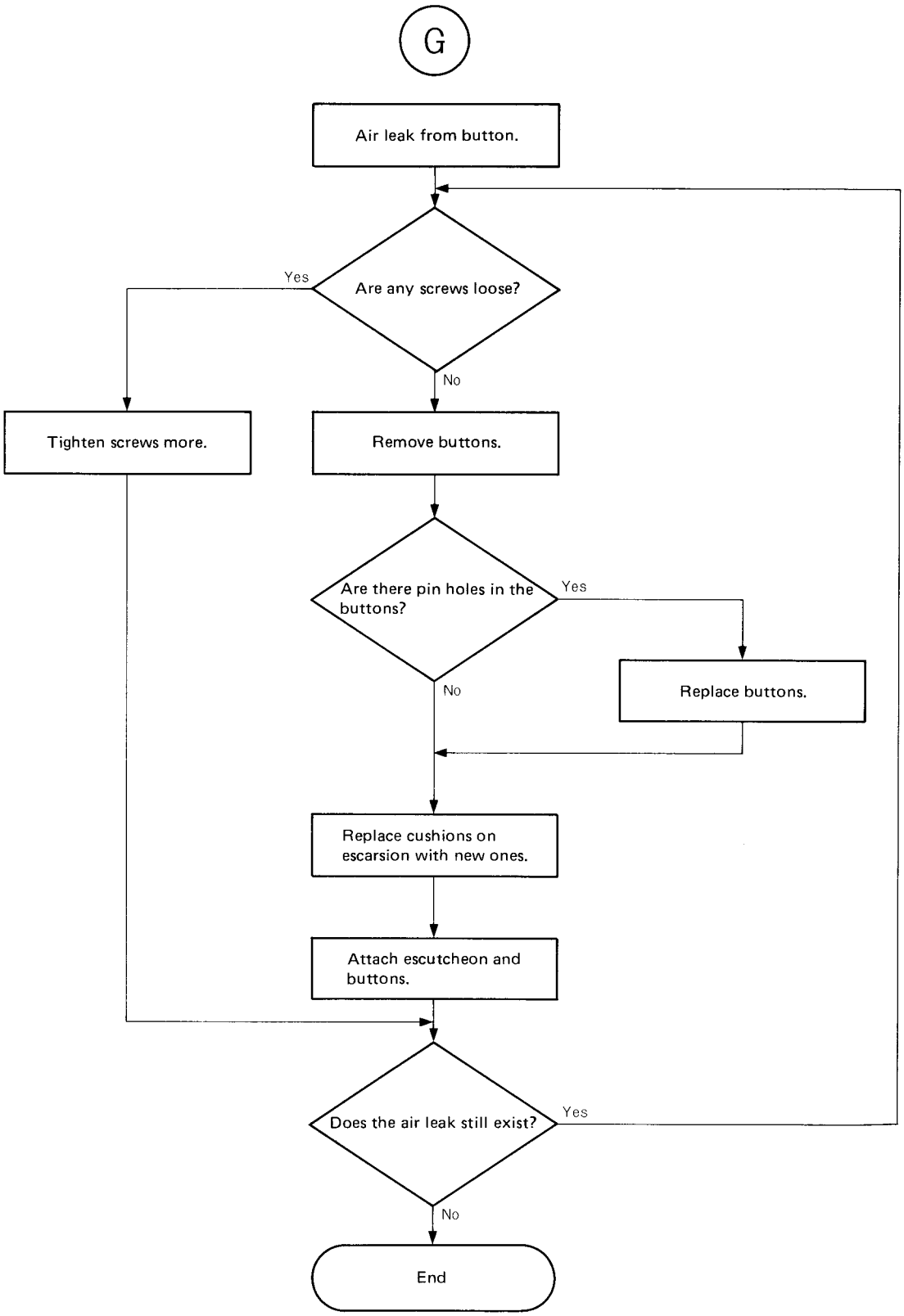
G
Air leak from button.
Are any screws loose?
Yes
No
Tighten screws more.
Remove buttons.
Are there pin holes in the buttons?
Yes
No
Replace buttons.
Replace cushions on escarsion with new ones.
Attach escutcheon and buttons.
Does the air leak still exist?
Yes
No
End

Fig. 16

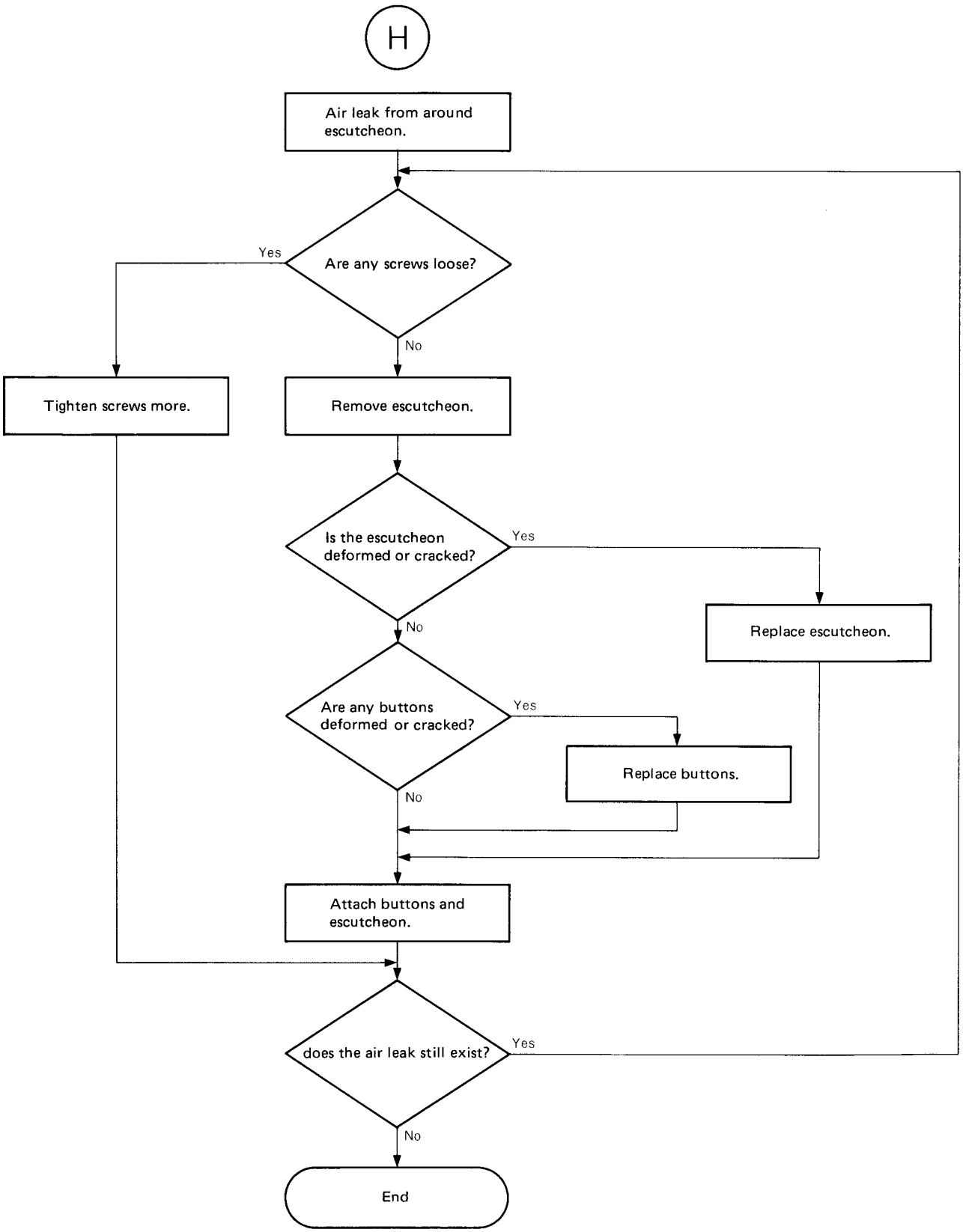
H
Air leak from around escutcheon.
Are any screws loose?
Yes
No
Tighten screws more.
Remove escutcheon.
Is the escutcheon deformed or cracked?
Yes
No
Replace escutcheon.
Are any buttons deformed or cracked?
Yes
No
Replace buttons.
Attach buttons and escutcheon.
does the air leak still exist?
Yes
No
End

Fig. 17

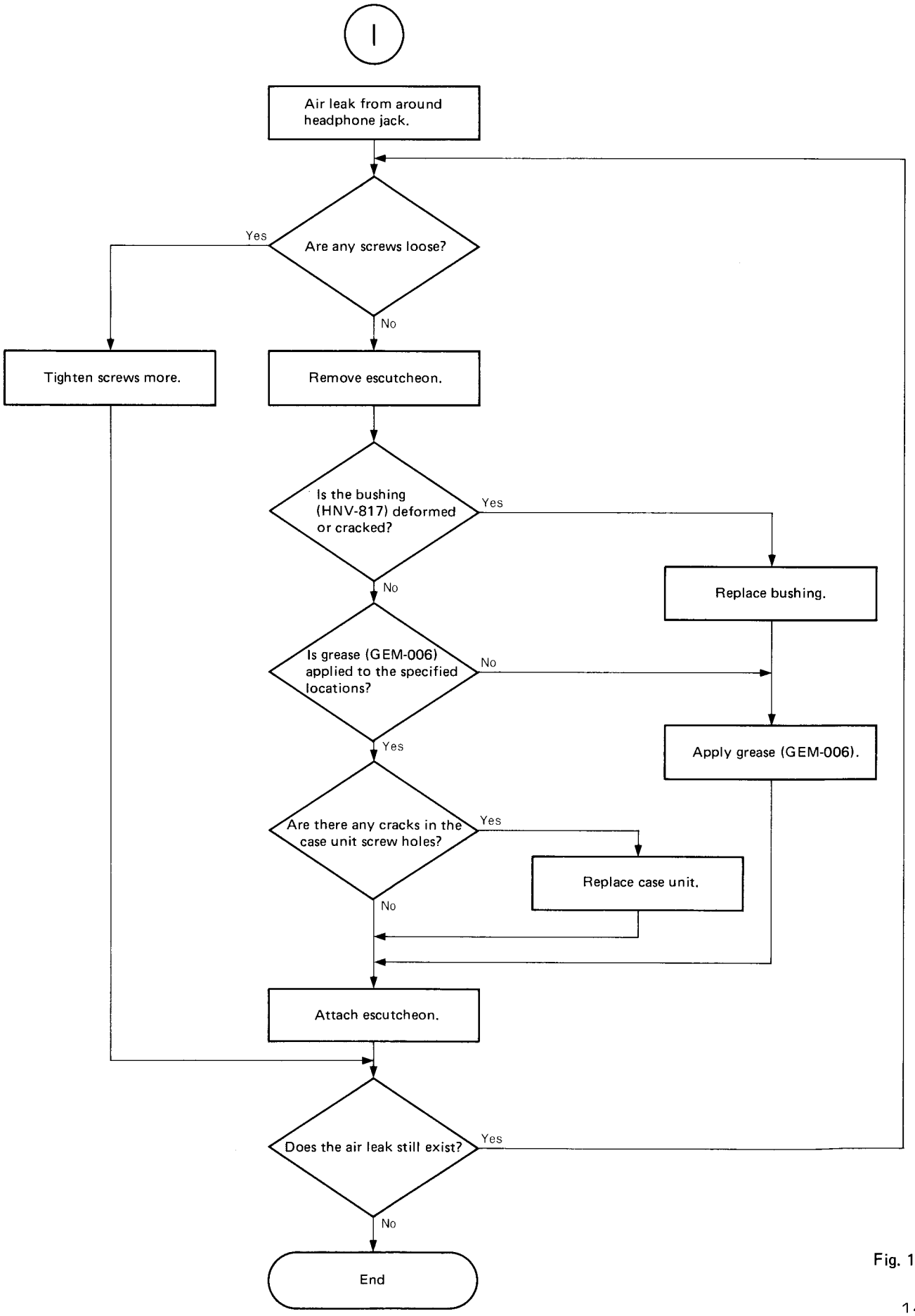
I
Air leak from around headphone jack.
Are any screws loose?
Yes
No
Tighten screws more.
Remove escutcheon.
Is the bushing (HNV-817) deformed or cracked?
Yes
No
Replace bushing.
Is grease (GEM-006) applied to the specified locations?
No
Yes
Apply grease (GEM-006).
Are there any cracks in the case unit screw holes?
Yes
No
Replace case unit.
Attach escutcheon.
Does the air leak still exist?
Yes
No
End

Fig. 18

PIONEER

Service Manual

REPAIR & ADJUSTMENTS

ORDER NO.
HRT-228-0

POCKETABLE STEREO CASSETTE PLAYER

PK-5AW (SV)

SILVER

US, CA, E, G

PK-5AW (YL)

YELLOW

US, CA, E, G

- For the circuit and mechanism descriptions, please refer to the supplement of model PK-R7AW service manual (HRT-230).
- 'Dolby' and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
- Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation.

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NOTICE:
This model is a water-resistant type. To prvent water leak, be sure to apply the designated silicone grease and adhesive to the parts illustrated on page 2 when re-assembling.

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
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QUESTIONNAIRE MODEL _____

One Model per questionnaire

Dear Servicer,

Thank you for your cooperation in the post-sale service of Pioneer products.

This questionnaire is used as a tool to improve the serviceability of our products and service manuals. Please evaluate this model and service manual by answering the following questions. Your ideas may be realized in our future products. Your answers will be appreciated. Thank you.

PIONEER ELECTRONIC CORP.

T. Nakagawa, Manager, Service Section, International Division

1. SERVICING EVALUATION	Circle applicable number:	Good		Fair		Poor
a. Disassembly/Re-assembly:		1	2	3	*4	*5
b. Circuit Checks:		1	2	3	*4	*5
c. Replacement of Parts:		1	2	3	*4	*5
d. Adjustment (s):		1	2	3	*4	*5

* If (4) or (5) was circled, please be specific.

QUESTINAIRE Modèle _____

Un modèle par questionnaire

Cher Monsieur,

Nous voudrons faire l'enquête sur la réparation et le manuel de service comme indiqué dans la formule ci-jointe. Cette enquête a pour objectif d'améliorer la facilité de la réparation et le manuel de service. Vos précieux conseils seront sûrement considérés dans le processus de la réalisation de produits.
Nous vous remercions de votre coopération.

Veuillez agréer, monsieur, l'expression de nos sentiments distingués.

PIONEER ELECTRONIC CORPORATION

T. Nakagawa, Manager, Service Section, Administration Department, International Division

1. EVALUATION EN FACILITE DE SERVICE MODÈLE	Circulez le numéro. Bon,		Passable,		Mauvais,
a. Démontage/remontage	1	2	3	*4	*5
b. Examen de circuits	1	2	3	*4	*5
c. Rechange de pièces	1	2	3	*4	*5
d. Facilité de réglage	1	2	3	*4	*5

* Si vous circulez No. 4 ou 5, donnez l'explication concrète.

Querido senor,

Muchas gracias por
el servicio de post-
Su opinion e idea e

Nos complacemos e

PIONEER ELECT

T. Nakagawa, Mana

1. EVALUACION
MODELO

a. Desmonte:

b. Examen de circ

c. Reemplazo de

d. Ajuste:

* Si marca (4) o (

questionnaire

ce manuals.
Your ideas may be

Poor	
*4	*5
*4	*5
*4	*5
*4	*5

QUESTINAIRE

Modèle _____
Un modèle par questionnaire

Cher Monsieur,

Nous voudrons faire l'enquête sur la réparation et le manuel de service comme indiqué dans la formule ci-jointe. Cette enquête a pour objectif d'améliorer la facilité de la réparation et le manuel de service. Vos précieux conseils seront sûrement considérés dans le processus de la réalisation de produits.
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PIONEER ELECTRONIC CORPORATION

T. Nakagawa, Manager, Service Section, Administration Department, International Division

1. EVALUATION EN FACILITE DE SERVICE MODÈLE	Circulez le numéro. Bon,		Passable,		Mauvais,
a. Démontage/remontage	1	2	3	*4	*5
b. Examen de circuits	1	2	3	*4	*5
c. Rechange de pièces	1	2	3	*4	*5
d. Facilité de réglage	1	2	3	*4	*5

* Si vous circulez No. 4 ou 5, donnez l'explication concrète.

ENCUESTA

Modelo_____
Uno modelo por encuesta

Querido senor,

Muchas gracias por su cooperación de servicio de post-venta de productos de Pioneer. Esto es para mejorar el servicio de post-venta de nuestros productos. Les pedimos a ustedes responder a las preguntas siguientes. Su opinion e idea estaran tenido en cuenta en los productos futuros.

Nos complacemos en saludarles muy atentamente,

PIONEER ELECTRONIC CORPORATION

T. Nakagawa, Manager, Service Section, Administration Department, International Division

1. EVALUACION EN LA FACILIDAD DE SERVICIO MODELO	Marque uno entre los numeros siguientes. Bueno		Medio		Malo
a. Desmonte:	1	2	3	*4	*5
b. Examen de circuito:	1	2	3	*4	*5
c. Reemplazo de piezas:	1	2	3	*4	*5
d. Ajuste:	1	2	3	*4	*5

* Si marca (4) o (5), ejemplifiquelo concretamente.

e. Su consejo, opinion u idea en el servicio de este modelo.

2. EVALUACION DE MANUAL DE SERVICIO

a. Descripción

b. Circuito diagramma

3. OTRAS PARTES DIFICIL POR REPARAR

Respondido por

Nombre :

Compania :

Dirección :

Fecha :

Edad :

Manda esta enquesta al domicilio de distribuidor por favor.

e. Votre conseil ou avis sur la service

2. VOTRE APPRÉCIATION EN SERVICE MANUEL

a. Déscription

b. Circuit diagramme

3. AUTRES POINTS DIFFICILES

Répondé par :

Nom :

Compagnie :

Adresse :

Date :

Age :

Adressez-vous ce questionnaire au distributeur s'il vous plait.

e. Your advice,

2. SERVICE M

a. Circuit & Me

b. Circuit Diagr

3. OTHER

Please descri

Completed by :

Company Name

Address :

City/State/Zip :

Please send this for

e. Your advice, opinion or ideas related to servicing this product.

2. SERVICE MANUAL EVALUATION

a. Circuit & Mechanism Description

b. Circuit Diagram

3. OTHER

Please describe other areas of servicing which you may find difficult.

Completed by : Date :

Company Name :

Address :

City/State/Zip :

Please send this form filled to the distributor in your country.

1. PARTS LOCATION

NOTE

- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ : GENERALLY MOVES FASTER THAN ★.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

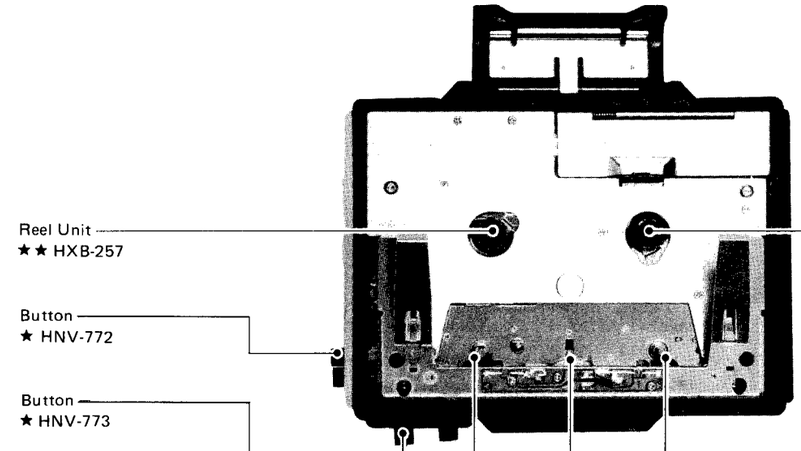


Fig. 1

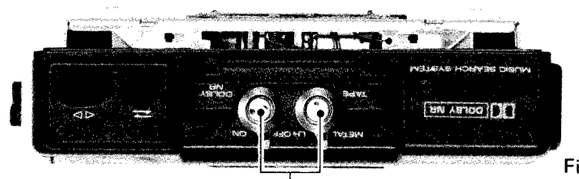


Fig. 2

2. DISASSEMBLY

- **Removing the Door Assembly**

1. Pull the shaft out from the left side and remove the door assembly.
2. When assembling the unit again, insert the shaft after passing the cassette holder through the hook in the door assembly.

Order no. for the grease, adhesive and tools.

order no.	description
GYL-015	Silicone based adhesive
GEM-006	Silicone grease for fixed components.
GEM-007	Silicone grease for movable components.
GGL-060	Crab-type screwdriver
GGL-061	Crab-type screwdriver

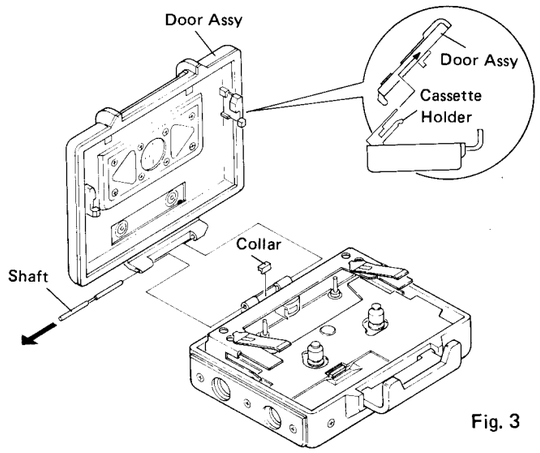


Fig. 3

- **Replacing the Packing**

1. Remove the packing from the door assembly.
2. When reassembling, attach the new packing using a silicone based adhesive (GYL-015).

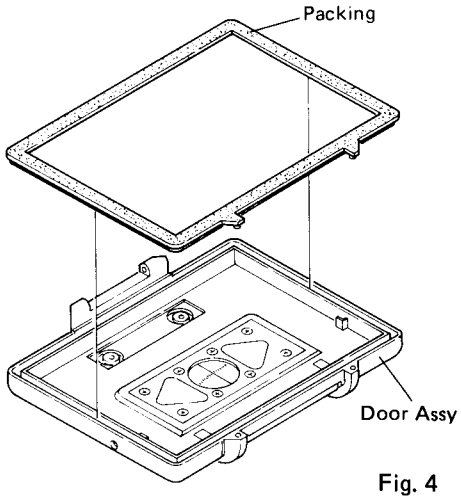


Fig. 4

- **Removing the Cassette Mechanism Assy and Other Related Parts**

1. The cassette mechanism assy can be removed after removing the escutcheons, brackets and buttons.

Note: When removing the cassette mechanism assy, be careful it does not catch on the volume unit.

Parts marked with an asterisk (*) are coated with silicone grease (GEM-006) to resist water.

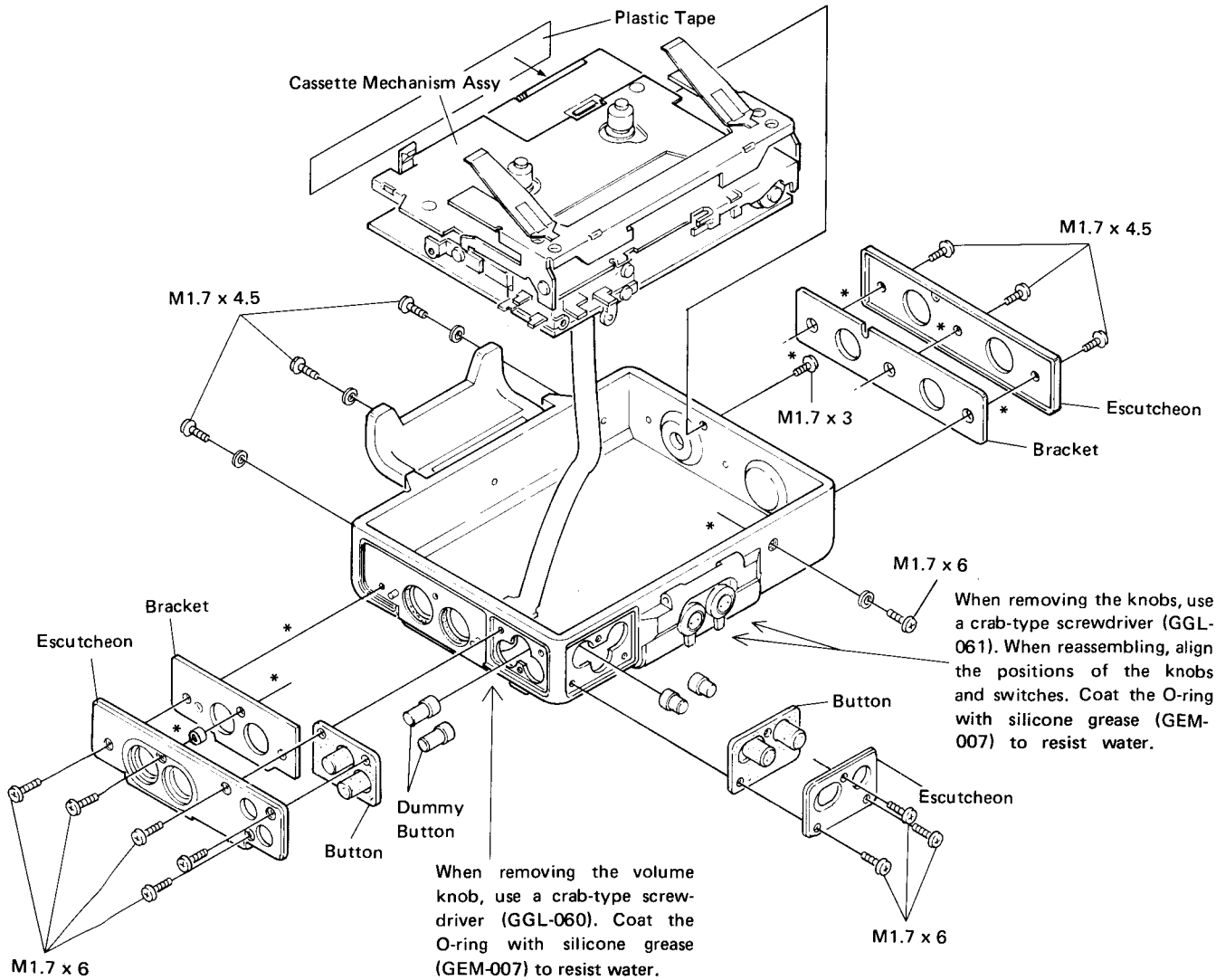

Plastic Tape
Cassette Mechanism Assy
M1.7 x 4.5
M1.7 x 4.5
M1.7 x 3
Escutcheon
Bracket
M1.7 x 6
When removing the knobs, use a crab-type screwdriver (GGL-061). When reassembling, align the positions of the knobs and switches. Coat the O-ring with silicone grease (GEM-007) to resist water.
Bracket
Escutcheon
Button
Escutcheon
Dummy Button
Button
When removing the volume knob, use a crab-type screwdriver (GGL-060). Coat the O-ring with silicone grease (GEM-007) to resist water.
M1.7 x 6
M1.7 x 6

Fig. 5

- **Removing the Amp Unit**

1. Remove the four screws and lift off the shield.
2. When the soldering at point A is removed, the amp unit can be removed. (The negative side spring of the battery terminal is at point B; since this can catch on the battery case, remove the amp unit while holding the spring down.)
3. When reassembling, be sure to align the amp unit switch with the cassette mechanism lever.

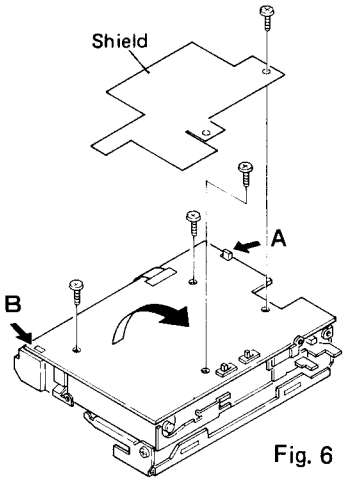


Fig. 6

- **Attaching the Belt**

1. Attach the belt as shown in figure 7.

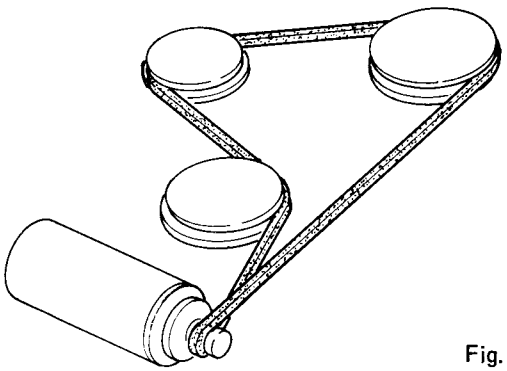
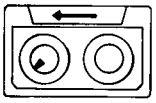
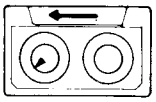
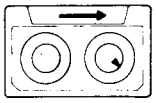
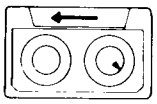


Fig. 7

3. ADJUSTMENT

3.1 CHECK POINTS OF CASSETTE MECHANISM

Confirm the following items when replacing parts of the cassette mechanism.	■ Tape speed deviation: 3,000 ± 90Hz (4.76 cm/s ±3%) Using an STD-301, measure the speed at the start and end of winding and take the maximum value. Measuring time shall be 5 ~ 6 seconds.	■ Wow and flutter: Less than 0.28% (WRMS) Using an STD-301, measure the wow and flutter at the start and end of winding and take the maximum value. If values indicated by the pointer vary considerably, adjust to 70% of the minimum and maximum values. Measuring time shall be 5 ~ 6 seconds.
■ Fast forward and rewinding time: **Less than 150 seconds** Using an C-60, set to fast forward and rewind, and measure the time with a stop watch.	■ Winding torque: **28 ~ 48 g.cm**  Using a cassette type torque meter (120 g.cm), measure the minimum value while in the play mode. Measuring time shall be 5 ~ 6 seconds.	■ F.F torque: **More than 70g.cm**  Using a cassette type torque meter (120 g.cm), measure the value when the tape stops in the F.F. mode.
■ REW torque: **More than 70g.cm**  Using a cassette type torque meter (120 g.cm), measure the value when the tape stops in the REW mode.	■ Back tension torque: **Less than 3.5 g.cm**  After setting in the REW mode without loading a cassette tape for 5 minutes, measure the back tension torque in the play mode, using a cassette type torque meter.	■ Pinch roller pressure: **170 ~ 205g** Measure the pressure with a tension meter (1 kg) at the point where the rotor stops rotating at the center of the pinch roller.
■ Button operating force: PLAY . . . . . .Less than 300g STOP . . . . . .Less than 300g One-side Stop. . . . . .Less than 300g PROGRAM . . . . . .Less than 400g FF/REW . . . . . .Less than 600g		

3.2 TAPE SPEED ADJUSTMENT

- **Connection Diagram**

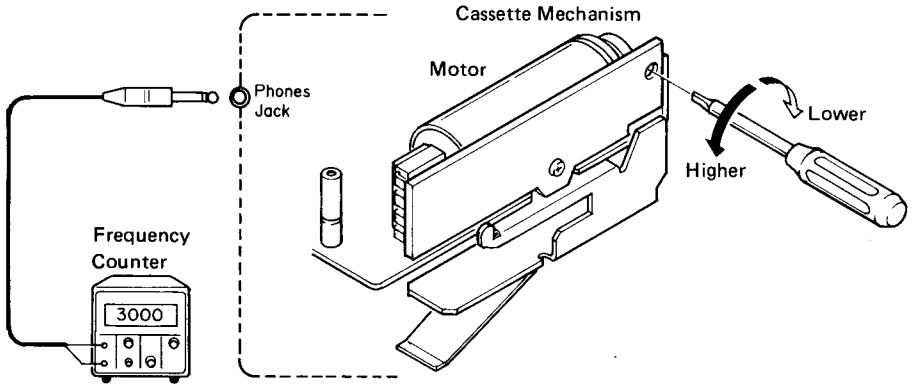


Fig. 8

- **To Adjust**

1. Connect the frequency counter to the phones jack.
2. Play back an STD-301 (3kHz, −10dB) and adjust the semi-fixed resistor on the motor control unit so the frequency counter reads 3000Hz ±90Hz. Rotate clockwise to lower the tape speed and counterclockwise to raise the speed.
3. Repeat this procedure with the tape moving in the opposite direction.

3.3 DOLBY NR ADJUSTMENT

- **Connection Diagram**

Switch position
Dolby NR switch. . . . . .OFF

Note: Use an electrically insulated screwdriver to perform these adjustments.

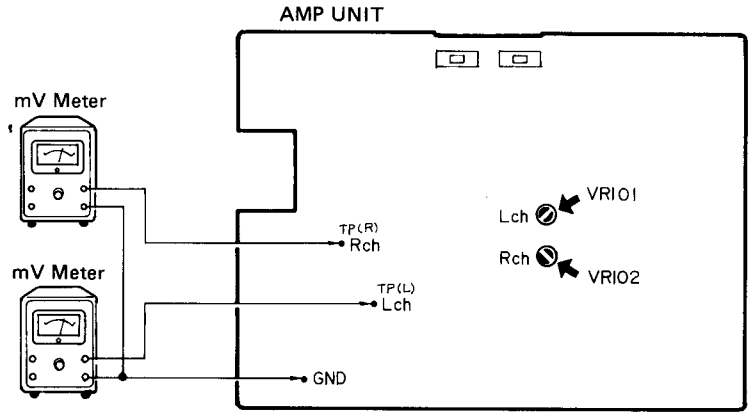


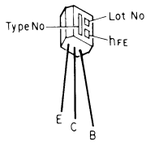
Fig. 9

- **To Adjust**

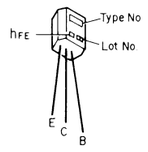
1. Play back a CT-150 (400Hz, 200nwb/m) in the forward direction and adjust VR101 (Lch) and VR102 (Rch) so the mV meters read 100mV. Rotate clockwise to raise the voltage and counterclockwise to lower the voltage.
2. Confirm that both mV meters read 100mV ±20mV in the reverse playback mode.

• IC's and Transistors

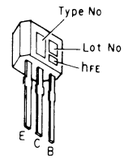
2SA608SP
2SD1012



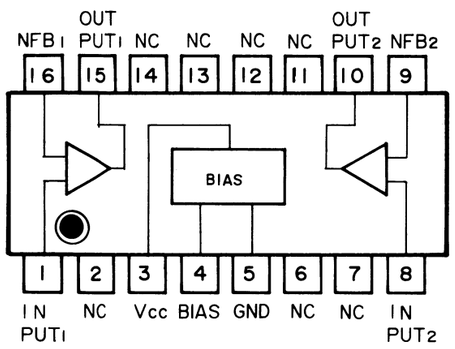
2SA1048
2SC2458



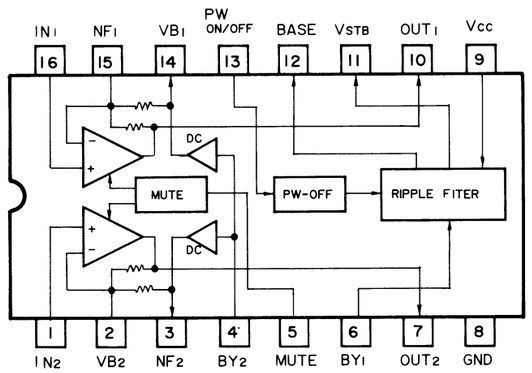
2SC536SP



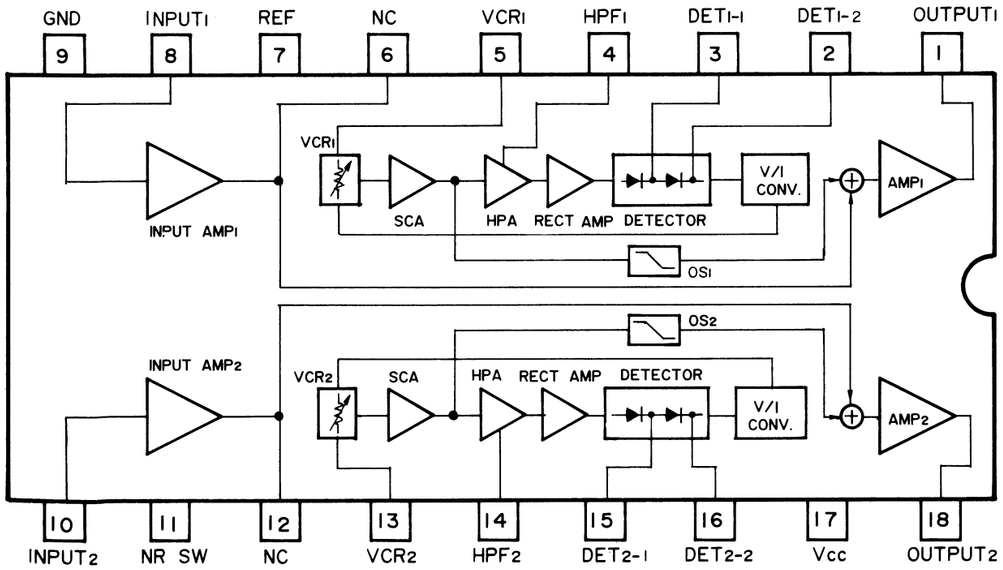
BAF3304



TA7688F



HA12048FP



Note: Refer to Service Manual PK-RA7W (HRT-229) for terminal function of HA12048FP and TA7688F.

4. PACKING METHOD

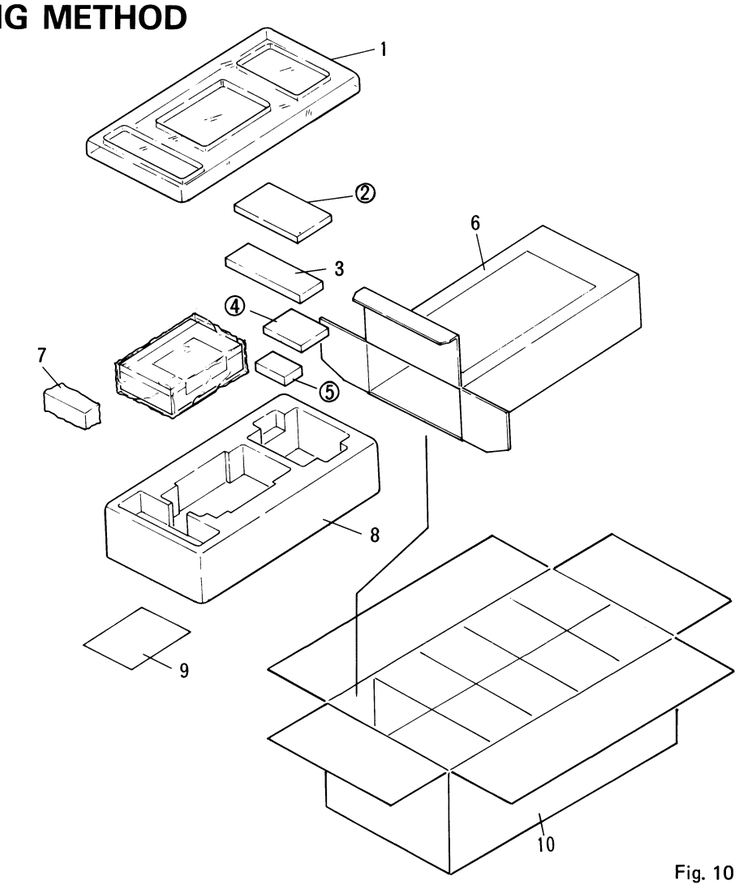


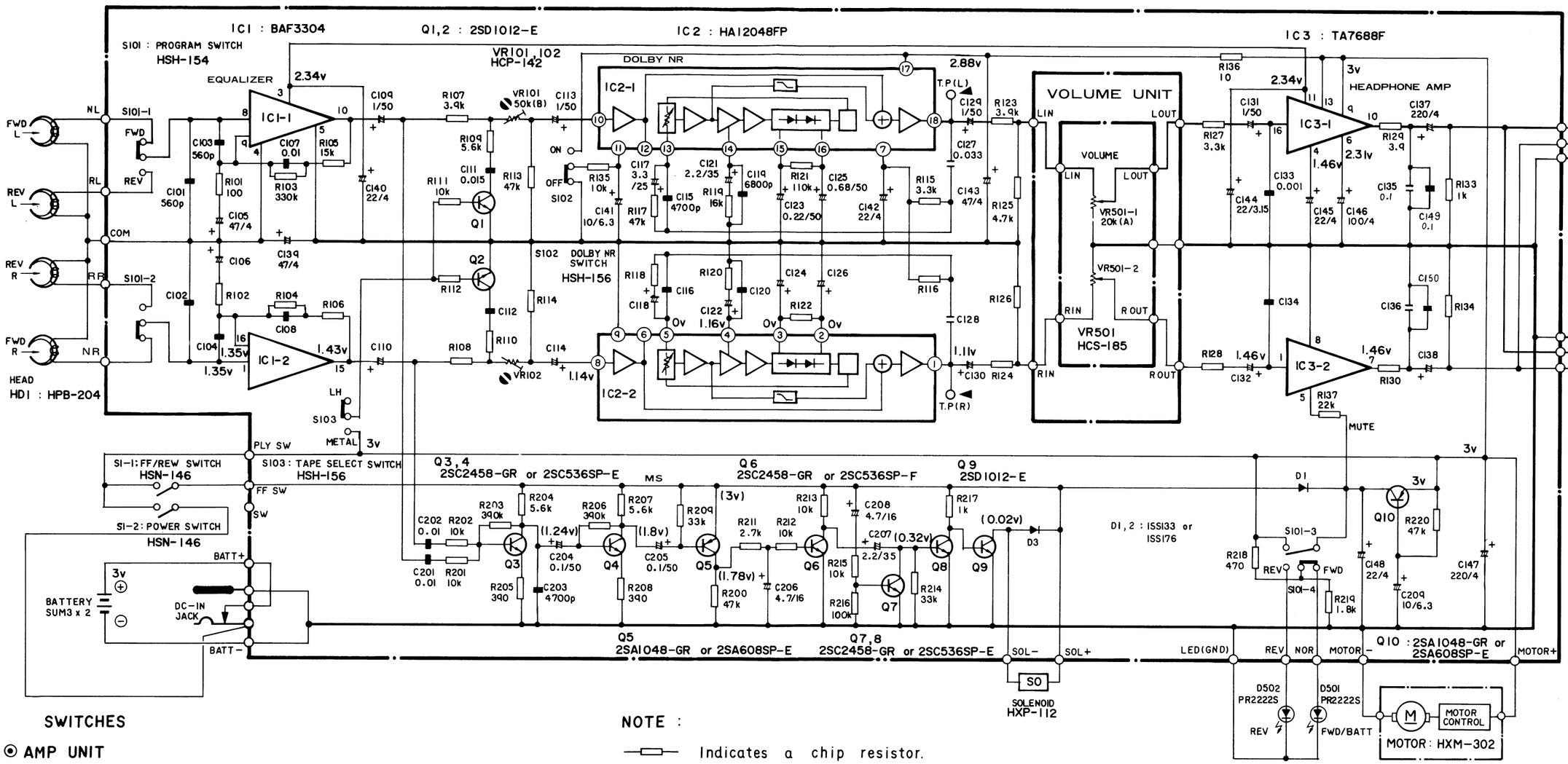
Fig. 10

• Parts List

- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ : GENERALLY MOVES FASTER THAN ★.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts whose parts numbers are omitted are subject to being not supplied.*

Mark	No.	Part No.	Description
	1.	HHA-836	Protector (B)
	2.		Recorded Cassette Tape
	3.	HMX-112	Belt
	4.	CXB-303	Belt Hanger Unit
	5.		Battery
	6.	HHA-922	Carton
	7.	HPH-103	Headphone
	8.	HHA-835	Protector (A)
	9.	HRD-220	Owner's Manual (PK-5AW/US, CA, E, G) (English, French, German)
		HRD-221	Owner's Manual (PK-5AW/E) (Spanish, Swedish, Dutch, Italy, Chinese, Arabic)
	10.	HHA-936	Contain Box (PK-5AW(SV)/US)
		HHA-937	Contain Box (PK-5AW(YL)/US)

5. SCHEMATIC CIRCUIT DIAGRAM



SWITCHES

⊙ AMP UNIT

SI01	PROGRAM SWITCH	FWD — REV
SI02	DOLBY NR SWITCH	ON — OFF
SI03	TAPE SELECT SWITCH	LH — METAL

⊙ MISCELLANEOUS

SI-1	FF/REW SWITCH	ON — OFF
SI-2	POWER SWITCH	ON — OFF

The underlined indicates the switch position.

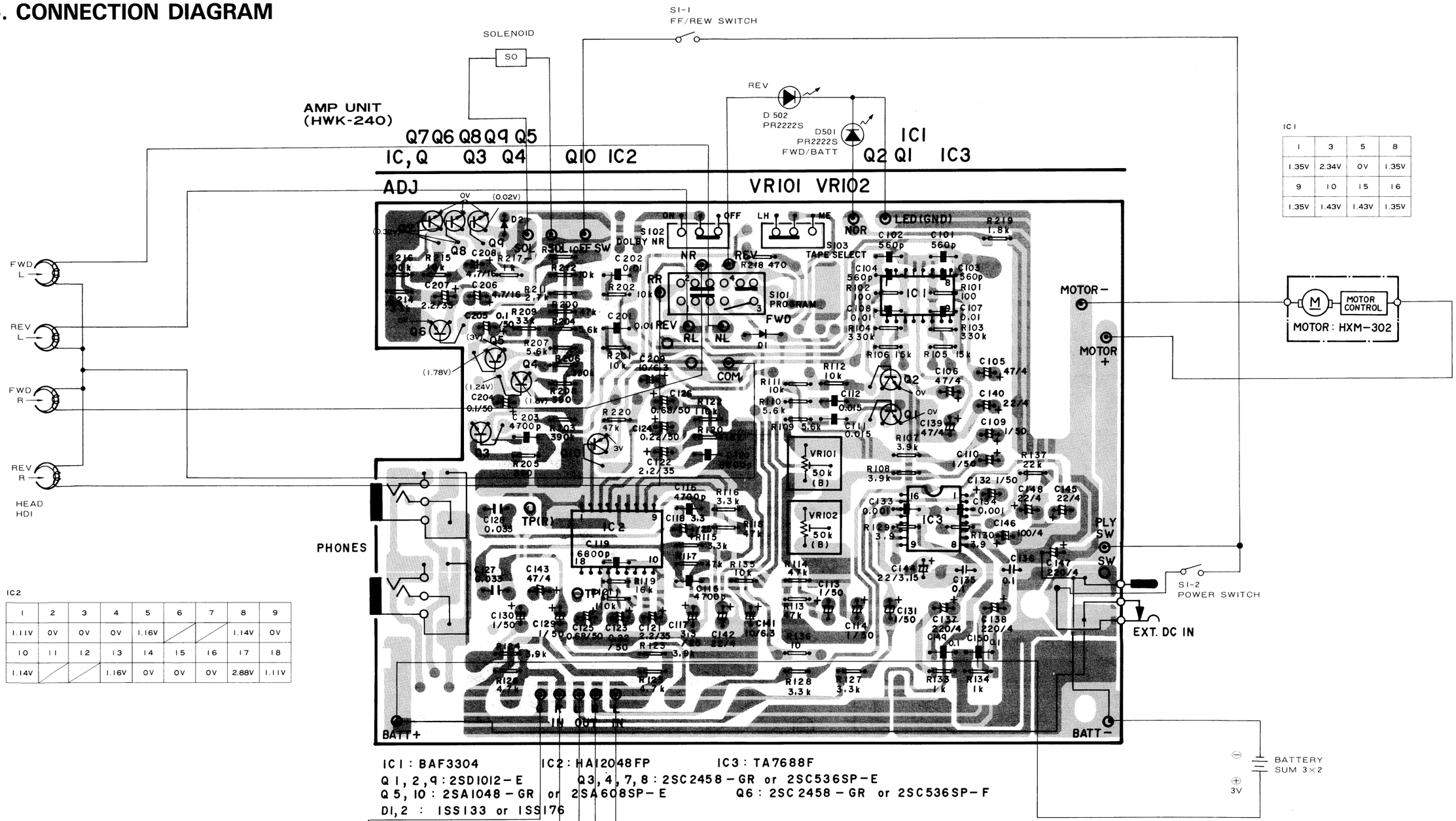
NOTE :

—▭— Indicates a chip resistor.

—▮— Indicates a chip capacitor.

Fig. 11

6. CONNECTION DIAGRAM



IC1

1	3	5	8
1.35V	2.34V	0V	1.35V
9	10	15	16
1.35V	1.43V	1.43V	1.35V

IC2

1	2	3	4	5	6	7	8	9
1.11V	0V	0V	0V	1.16V			1.14V	0V
10	11	12	13	14	15	16	17	18
1.14V			1.16V	0V	0V	0V	2.88V	1.11V

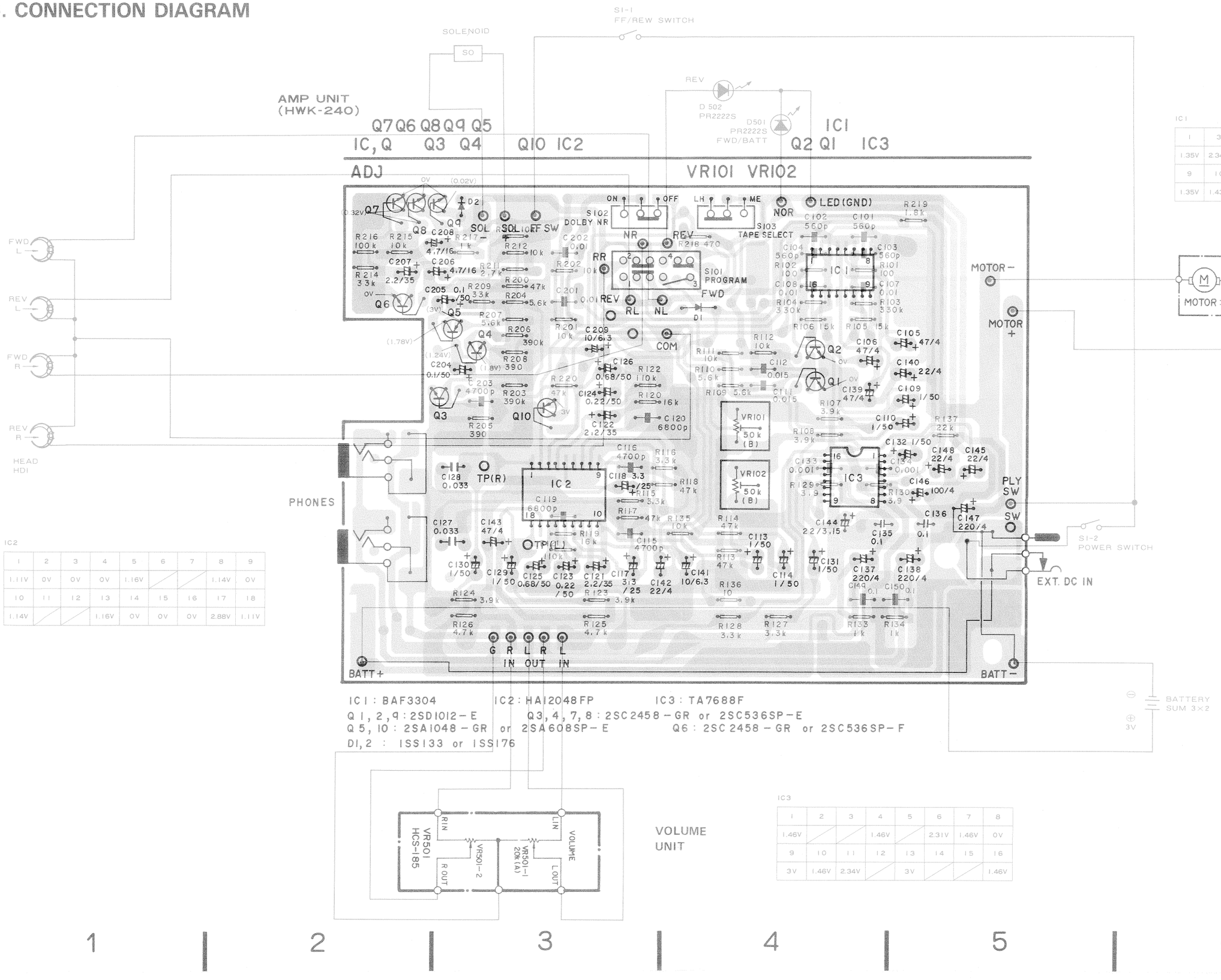
IC1 : BAF3304 IC2 : HA12048FP IC3 : TA7688F
Q1, 2, 9 : 2SD1012 − E
Q3, 4, 7, 8 : 2SC2458 − GR or 2SC536SP − E
Q5, 10 : 2SA1048 − GR or 2SA608SP − E
Q6 : 2SC2458 − GR or 2SC536SP − F
D1, 2 : ISS133 or ISS176

IC3

1	2	3	4	5	6	7	8
1.46V			1.46V		2.31V	1.46V	0V
9	10	11	12	13	14	15	16
3V	1.46V	2.34V		3V			1.46V

Fig. 12

6. CONNECTION DIAGRAM



IC1

1	3	5	8
1.35V	2.34V	0V	1.35V
9	10	15	16
1.35V	1.43V	1.43V	1.35V

IC2

1	2	3	4	5	6	7	8	9
1.11V	0V	0V	0V	1.16V			1.14V	0V
10	11	12	13	14	15	16	17	18
1.14V			1.16V	0V	0V	0V	2.88V	1.11V

IC3

1	2	3	4	5	6	7	8
1.46V			1.46V		2.31V	1.46V	0V
9	10	11	12	13	14	15	16
3V	1.46V	2.34V		3V			1.46V

IC1 : BAF3304 IC2 : HA12048FP IC3 : TA7688F

Q 1, 2, 9 : 2SD1012 − E Q3, 4, 7, 8 : 2SC2458 − GR or 2SC536SP − E

Q 5, 10 : 2SA1048 − GR or 2SA608SP − E Q6 : 2SC2458 − GR or 2SC536SP − F

DI, 2 : ISS133 or ISS176

Fig. 12

7. CHASSIS EXPLODED VIEW

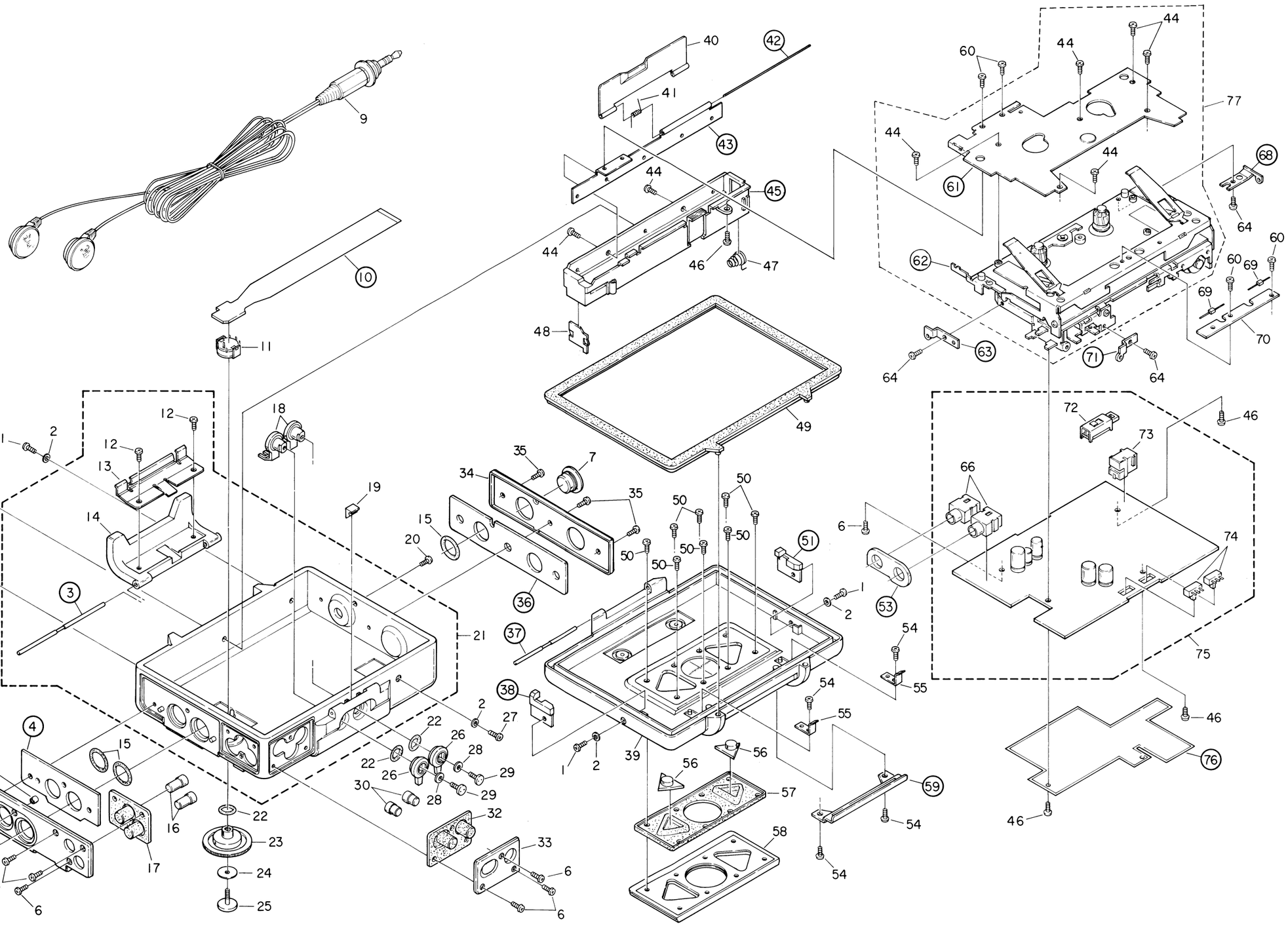


Fig. 13

• Parts List

Mark	No.	Part No.	Description
	1.	HBA-422	Screw M1.7 x 4.5
	2.	HBF-184	Washer
	3.		Shaft
	4.		Bracket
	5.	HNS-729	Escutcheon (PK-5AW (SV))
		HNS-767	Escutcheon (PK-5AW (YL))
	6.	HBA-361	Screw M1.7 x 6
	7.	HLA-519	Cap
	8.	VACANT	---
	9.	HPH-103	Headphone
	10.		P.C. Board
★★	11.	HCS-185	Volume
	12.	HBA-339	Screw
	13.	HNC-936	Bracket
	14.	HNS-731	Hook
	15.	HNV-776	O ring
★	16.	HAC-363	Dummy Button
★	17.	HNV-772	Button
	18.	HNV-774	Lever
	19.	HNV-779	Collar
	20.	HBA-355	Screw M1.7 x 3
	21.	HXB-328	Case Unit (PK-5AW (SV))
		HXB-321	Case Unit (PK-5AW (YL))
	22.	HNV-775	O ring
★	23.	HAA-239	Knob (VOLUME)
	24.	HBF-183	Washer
	25.	HBA-333	Screw
★	26.	HAC-365	Knob (TAPE, DOLBY NR)
	27.	HBA-425	Screw M1.7 x 6
	28.	HBF-182	Washer
	29.	HBA-332	Screw
★	30.	HAC-364	Dummy Button
	31.	VACANT	---
★	32.	HNV-773	Button
	33.	HNS-761	Escutcheon (PK-5AW (SV))
		HNS-730	Escutcheon (PK-5AW (YL))
	34.	HNS-841	Escutcheon (PK-5AW (SV))
		HNS-840	Escutcheon (PK-5AW (YL))
	35.	HBA-358	Screw M1.7 x 4.5
	36.		Bracket
	37.		Shaft
	38.		Arm
	39.	HXB-325	Door Unit (PK-5AW (SV))
		HXB-295	Door Unit (PK-5AW (YL))
	40.	HNC-930	Cover
	41.	HBH-542	Spring
	42.		Shaft
	43.		Bracket
	44.	HBA-198	Screw M1.7 x 2
	45.		Battery Case
	46.	HBA-165	Screw M1.7 x 3
	47.	HBH-543	Spring
	48.	HBL-217	Terminal
	49.	HNV-768	Packing (PK-5AW (SV))
		HNV-782	Packing (PK-5AW (YL))
	50.	HBA-262	Screw M1.7 x 3.5
	51.		Arm
	52.	VACANT	---
	53.		Cover
	54.	HBA-400	Screw M1.7 x 2.5
	55.	HBL-214	Spring
	56.	HNV-794	Bush
★	57.	HNV-770	Button
	58.	HXB-296	Cover Unit (PK-5AW (SV))
		HXB-322	Cover Unit (PK-5AW (YL))
	59.		Bracket
	60.	HBA-159	Screw M1.7 x 1.6
	61.		Cover
	62.		Cassette Mechanism Unit
	63.		Bracket
	64.	HBA-257	Screw M1.7 x 2
	65.	VACANT	---
	66.	HKN-167	Jack (PHONES)
	67.	VACANT	---
	68.		Bracket
★	69.	PR2222S	LED
	70.	HNP-548	P.C. Board
	71.		Bracket
★★	72.	HSH-154	Switch (PROGRAM)
	73.	HKN-142	Jack (DC IN)
★★	74.	HSH-156	Switch (TAPE, DOLBY NR)
	75.	HWK-240	Amp Unit
	76.		Shield
	77.	HXB-301	Cassette Mechanism Assy
	78.	HNV-817	Bush

8. CASSETTE MECHANISM EXPLODED VIEW

• Parts List

Mark	No.	Part No.	Description
	1.	HBA-163	Screw M1.7 x 2.5
★★	2.	HSN-146	Switch (FF/REW, POWER)
	3.		P.C. Board
	4.	VACANT	–––
	5.	VACANT	–––
★★	6.	HXB-257	Reel Unit
★★	7.	HXB-256	Reel Unit
	8.	HXB-276	Pulley Unit
	9.	HBF-117	Washer
	10.	HBF-181	Washer
	11.	HNV-760	Gear
	12.	HBF-180	Washer
	13.	HBF-179	Washer
	14.	HNV-758	Gear
	15.	HBF-145	Washer
★★	16.	HNT-158	Belt
	17.	VACANT	–––
	18.	HBA-160	Screw M1.7 x 1.8
	19.	HBH-549	Spring
	20.		Holder Unit
	21.	VACANT	–––
	22.	VACANT	–––
	23.		Chassis Unit
	24.	HXB-258	Gear Unit
	25.	VACANT	–––
	26.	HBH-520	Spring
	27.	HBH-522	Spring
	28.	HBH-519	Spring
	29.	HXB-259	Gear Unit
	30.	HXB-261	Flywheel Unit
★★	31.	HXM-302	Motor
	32.		Lever
	33.	CBG-005	Washer
	34.	HLA-507	Collar
	35.	HBA-205	Screw M1.7 x 4.5
	36.	HNT-141	Bush
	37.	HBA-168	Screw M1.7 x 4.5
	38.	HXP-112	Solenoid
	39.	YE12FUC	Washer
	40.	HBF-187	Washer
	41.	HNV-762	Arm
	42.	HBH-522	Spring
	43.	HNC-908	Lever
	44.	HBH-526	Spring
	45.	YE15FUC	Washer

Mark	No.	Part No.	Description
	46.	HBH-524	Spring
	47.	HNC-909	Lever (PROGRAM)
	48.	HBH-516	Spring
	49.	HLA-509	Collar
	50.		Arm Unit (STOP)
	51.		Arm Unit (PLAY)
	52.	HBH-530	Spring
	53.	HBH-534	Spring
	54.	HBH-533	Spring
★★	55.	HXB-263	Pinch Roller Unit
	56.	HNC-903	Arm
	57.	VACANT	–––
	58.	HLA-508	Screw
★★	59.	HPB-204	Head
	60.	HBH-529	Spring
	61.	HBA-175	Screw M2 x 2.5
	62.	HNC-905	Clamper
	63.	HNC-902	Spacer
	64.	HNC-904	Arm
	65.	HXB-267	Arm Unit
★★	66.	HXB-264	Pinch Roller Unit
	67.	HNV-759	Gear
	68.	HNC-906	Lever (STOP)
	69.	VACANT	–––
	70.	VACANT	–––
	71.	VACANT	–––
	72.	HXB-262	Flywheel Unit
	73.	HBA-154	Screw M1.4 x 3
	74.	HBE-129	Washer
	75.	HNR-191	Ball
	76.	HBH-515	Spring
	77.	HNV-761	Guide
	78.	VACANT	–––
	79.	HBA-165	Screw M1.7 x 3
	80.	HBH-532	Spring
	81.	HBH-535	Spring
	82.	HXB-269	Lever Unit (PLAY)
	83.	HXB-266	Holder Unit
	84.	HBH-528	Spring
	85.		Lever
	86.	HBH-521	Spring
	87.	HXB-275	Arm Unit
	88.	VACANT	–––
	89.	VACANT	–––
	90.	HLA-510	Shaft

- Cassette Mechanism

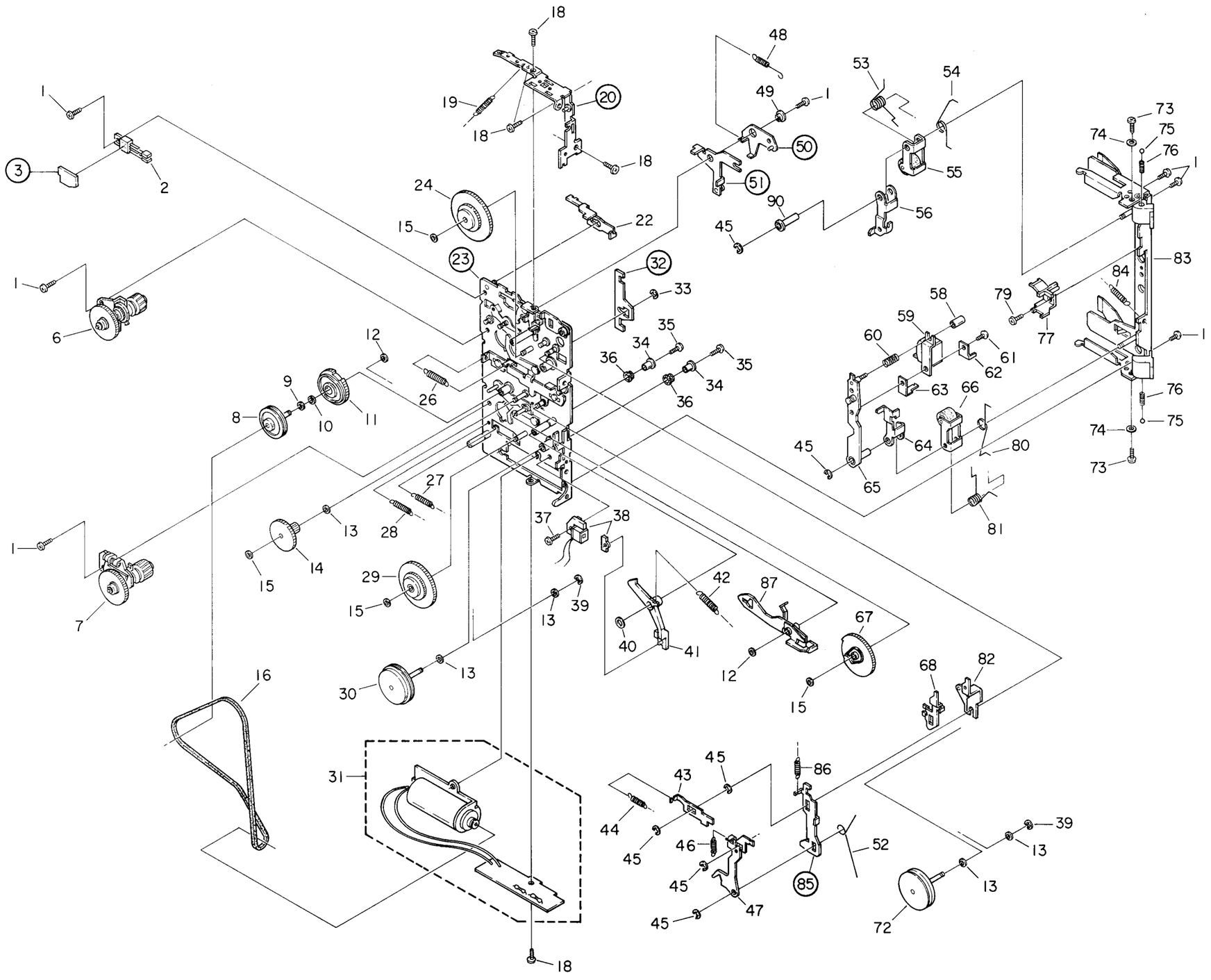


Fig. 14

9. ELECTRICAL PARTS LIST

NOTE:
When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	*56 × 10^1*	*561*	*RD1/4PS 5 6 1 J*
47kΩ	*47 × 10^3*	*473*	*RD1/4PS 4 7 3 J*
0.5Ω	*0R5*		*RN2H 0 R 5 K*
1Ω	*010*		*RS1P 0 1 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 × 10^1*		*RN1/4SR 5 6 2 1 F*

- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★: GENERALLY MOVES FASTER THAN ★.
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts whose parts numbers are omitted are subject to being not supplied.*

Amp Unit (HWK-240)

MISCELLANEOUS

Mark	Symbol & Description	Part No.
★★	IC1	BAF3304
★★	IC2	HA12048FP
★★	IC3	TA7688F
★★	Q1, Q2, Q9	2SD1012
★★	Q3, Q4, Q6 – Q8	2SC2458 or 2SC536SP
★★	Q5, Q10	2SA1048 or 2SA608SP
★	D1, D2	1SS133 or 1SS176
★★	S101 Switch (PROGRAM)	HSH-154
★★	S102, S103 Switch (DOLBY NR, TAPE SELECT)	HSH-156
★★	VR101, VR102 Semi-fixed, 50kΩ (B)	HCP-142

CHIP RESISTORS

Mark	Symbol & Description	Part No.
	R101 – R130, R133 – R137, R200 – R209, R211 – R220	RS1/8S□□□J
	R131, R132, R138 – R199, R210	VACANT

CAPACITORS

Mark	Symbol & Description	Part No.
	C101 – C104 Chip Capacitor	CKSYB561K50
	C105, C106, C139	CEA470M4LS or CEA470M6R3LS
	C107, C108, C201, C202 Chip Capacitor	CKSYB103K50
	C109, C110, C113, C114, C129 – C132	CEA010M50LS
	C111, C112 Chip Capacitor	CKSYB153K50
	C115, C116, C203 Chip Capacitor	CKSYB472K50
	C117, C118	CEA3R3M25LS
	C119, C120 Chip Capacitor	CKSYB682K50
	C121, C122, C207	CEA2R2M35LS
	C123, C124	CEAR22M50LS
	C125, C126	CEAR68M50LS
	C127, C128	CQMA333J50L
	C133, C134 Chip Capacitor	CKSYB102K50
	C135, C136 0.1μF	CCG-093 or CKDBC104M25
	C137, C138, C147	CEA221M4LL
	C140, C142, C145, C148	CEA220M4LS or CEA220M6R3LS
	C141, C209	CEA100M6R3LS
	C143	CEA470M4LL
	C144	CSZA220M3R15
	C146	CEA101M4LL
	C149, C150 Chip Capacitor	CKSYF104Z25
	C151 – C200	VACANT
	C204, C205	CEA0R1M50LS
	C206, C208	CEA4R7M16LS

Volume Unit

Mark	Symbol & Description		Part No.
★★	VR501	Volume, 20kΩ (A)	HCS-185

Miscellaneous Parts List

Mark	Symbol & Description		Part No.
★	D501, D502	LED	PR2222S
★★	S1	Switch (FF/REW, POWER)	HSN-146
★★	HD1	Head	HPB-204
★★	M	Motor	HXM-302
	SO	Solenoid	HXP-112